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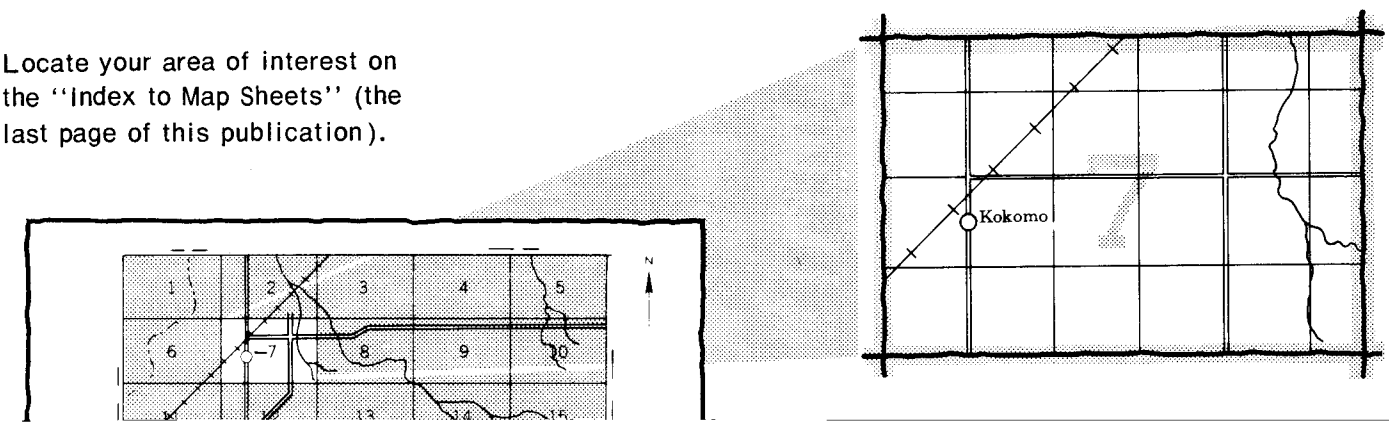
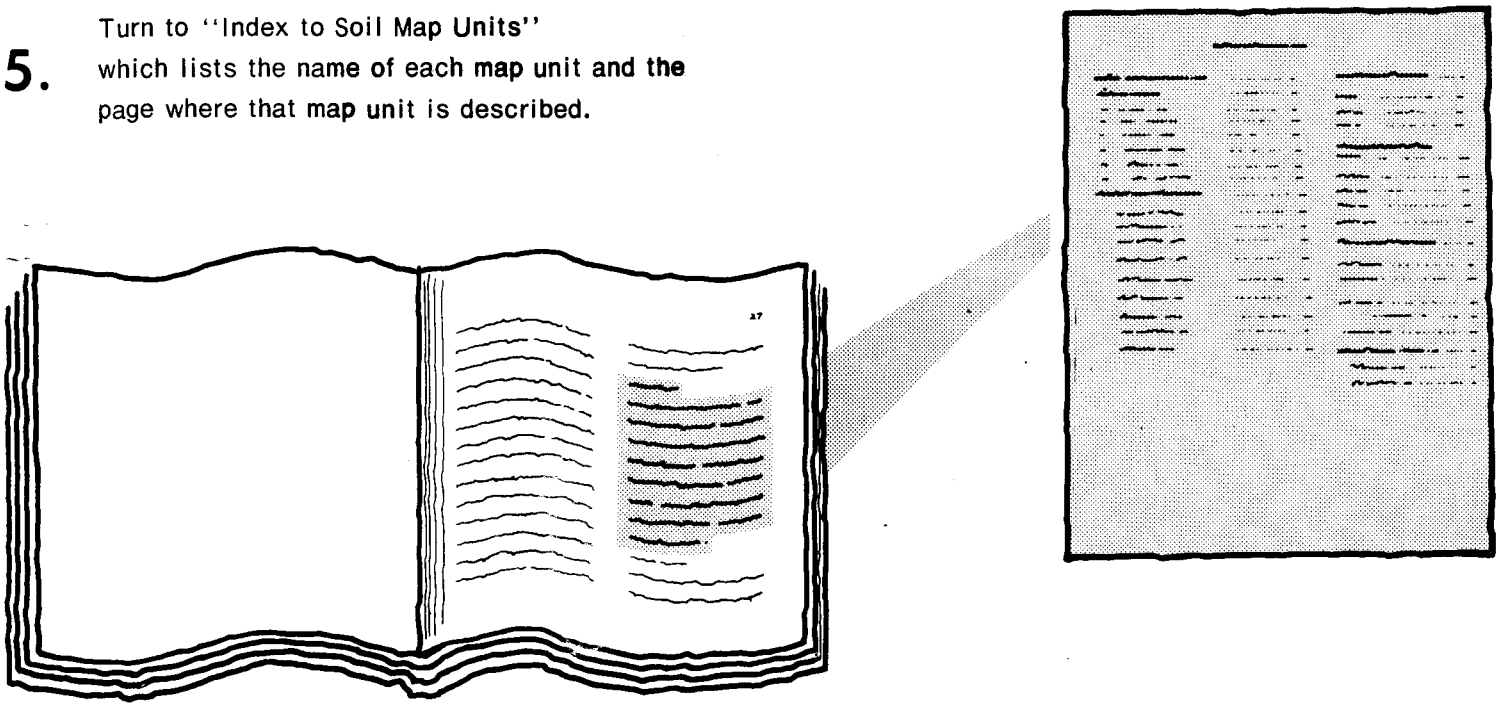
HOW TO USE

1. Locate your area of interest on the "Index to Map Sheets" (the last page of this publication).

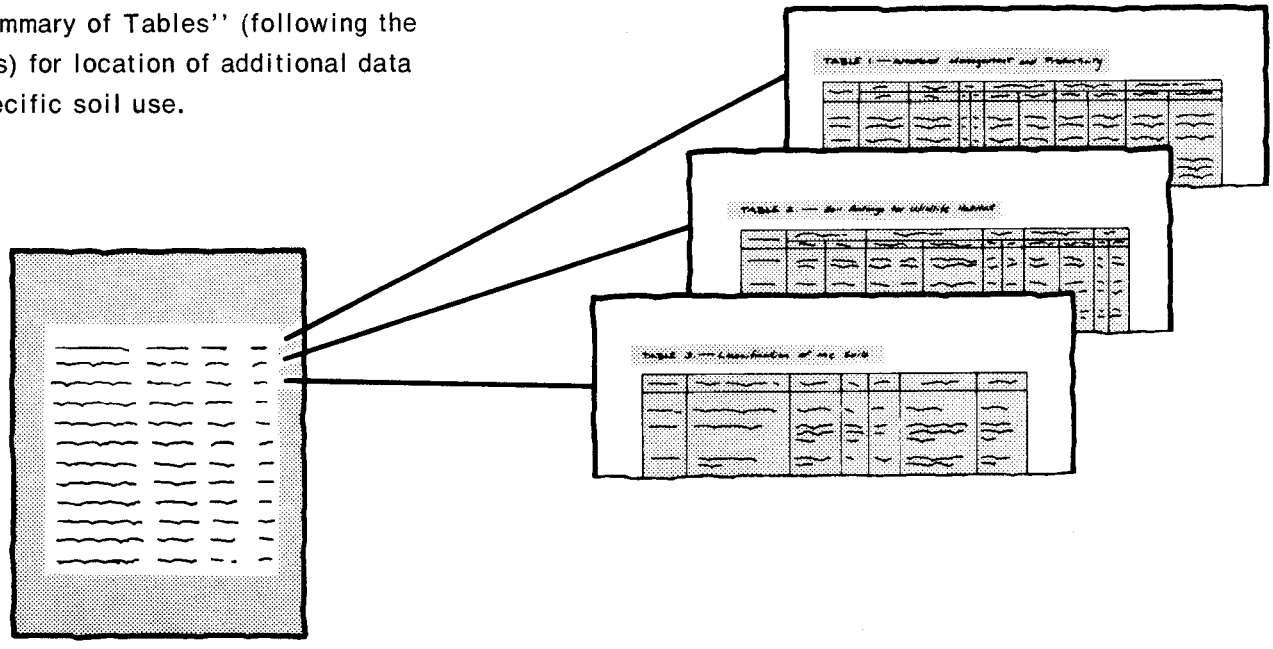


THIS SOIL SURVEY

5. Turn to "Index to Soil Map Units" which lists the name of each map unit and the page where that map unit is described.



6. See "Summary of Tables" (following the Contents) for location of additional data on a specific soil use.



This soil survey is a publication of the National Cooperative Soil Survey, a

contents

Index to map units iv
Summary of tables v
Foreword vii
General nature of the survey area 1
How this survey was made 4
General soil map units 7
Broad land use considerations 10
Detailed soil map units 13
Prime farmland 33
Use and management of the soils 35
Crops and pasture 35
Woodland management and productivity 37
Recreation 38
Wildlife habitat 39
Engineering 42
Soil properties 47
Engineering index properties 47
Physical and chemical properties 48
Soil and water features 49
Classification of the soils 51
Soil series and their morphology 51
Formation of the soils 62
Factors of soil formation 62
References 65
Glossary 67
Tables 73

soil series

Allemands series 51
Barbary series 52
Bellpass series 53
Lafitte series 56
Larose series 57
Rita series 57
Rita Variant 58

index to map units

AE—Allemands muck 13
Am—Allemands muck, drained 14
AN—Allemands-Larose association 15
BB—Barbary-Fausse association 16
BE—Bellpass-Scatlake association 17
Cm—Commerce silt loam 19
Co—Commerce silty clay loam 20
FA—Fausse-Sharkey association 21
FE—Felicity loamy fine sand, frequently flooded 22
KE—Kenner muck 23
LA—Lafitte-Clovelly association 25
Ra—Rita muck 25
Rv—Rita Variant muck 26
SA—Scatlake muck 27
SC—Scatlake-Felicity complex 28
Sh—Sharkey silty clay loam 29
Sk or SK—Sharkey clay 30
Sr—Sharkey clay, occasionally flooded 30
TB—Timbalier-Bellpass association 31
Tn—Tunica clay, frequently flooded 32
Va—Vacherie silt loam 32

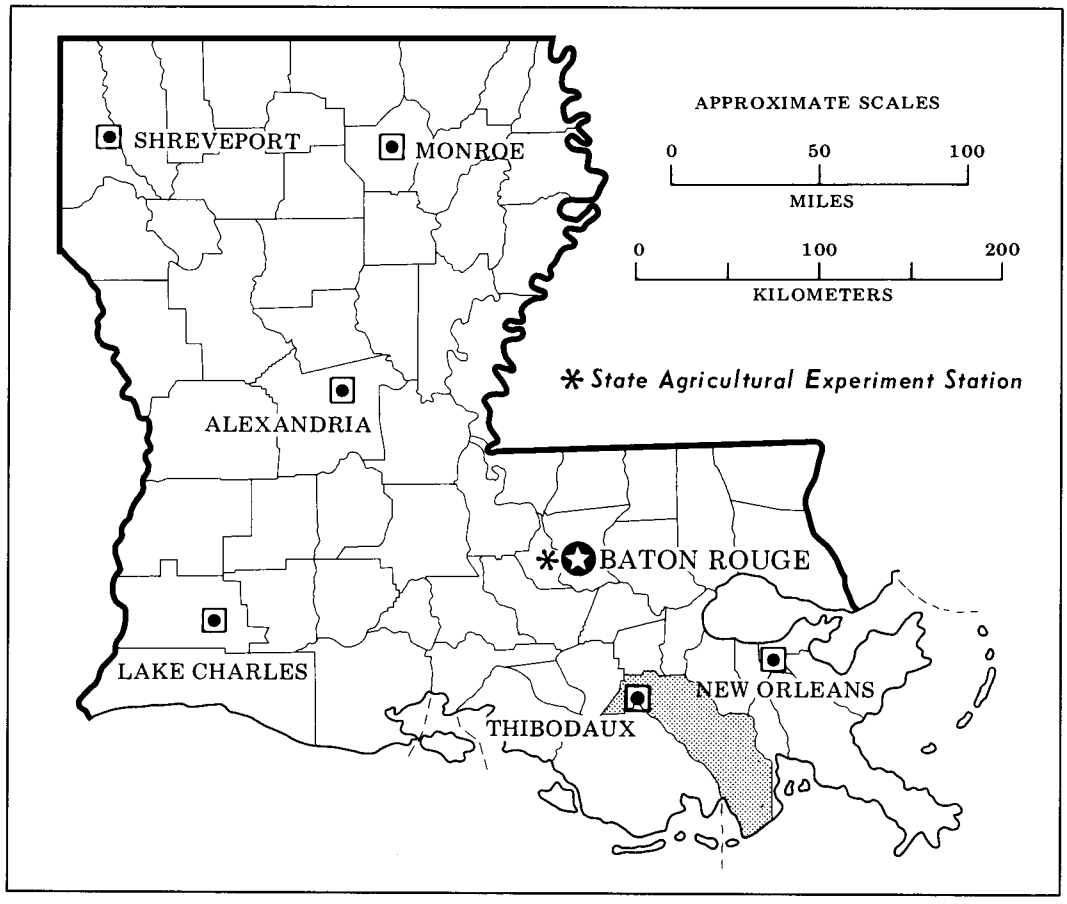
summary of tables

Temperature and precipitation (table 1) 74
Freeze dates in spring and fall (table 2) 75
Probability. Temperature.
Growing season (table 3) 75
Probability. Daily minimum temperature.
Acreage and proportionate extent of the soils (table 4) 76
Acres. Percent.
Yields per acre of crops and pasture (table 5) 77
Sugarcane. Soybeans. Corn. Rice. Common

Engineering index properties (table 15) 99
Depth. USDA texture. Classification—Unified, AASHTO. Fragments greater than 3 inches. Percentage passing sieve—4, 10, 40, 200. Liquid limit. Plasticity index.
Physical and chemical properties of the soils (table 16) 102
Depth. Clay. Moist bulk density. Permeability. Available water capacity. Reaction. Salinity. Shrink-swell potential. Erosion factors. Organic matter.
Soil and water features (table 17) 104
Hydrologic group. Flooding. High water table. Subsidence. Risk of corrosion.
Classification of the soils (table 18) 106
Family or higher taxonomic class.

foreword

This soil survey contains information that can be used in land-planning programs in Lafourche Parish. It contains predictions of soil behavior for



Location of Lafourche Parish in Louisiana.

soil survey of
Lafourche Parish, Louisiana

by S. Dayton Matthews, Soil Conservation Service

soils surveyed by S. Dayton Matthews, Dennis J. Daugereaux,
and Karen Wesche, Soil Conservation Service

United States Department of Agriculture, Soil Conservation Service
in cooperation with
Louisiana Agricultural Experiment Station and
Louisiana State Soil and water Conservation Committee

LAFOURCHE PARISH is in the southeastern part of Louisiana. Thibodaux, the parish seat, is 68 miles south of Baton Rouge, 58 miles southwest of New Orleans, and 99 miles southeast of Lafayette. The parish is bounded on the north by St. James Parish, on the east by St. Charles and Jefferson Parishes, on the south by the Gulf of Mexico, and on the west by Terrebonne and Assumption Parishes. The total area is 865,920 acres, of which 730,048 acres is land and 135,872 acres is large water areas in the form of lakes, bays, and streams. The population of the parish in 1980 was 82,442.

Loamy soils are dominant on the highest positions of the natural levees, and clayey soils are dominant on the low positions of the natural levees and in backswamps. Semifluid, organic soils are dominant in the marshes.

Most of the soils in marshes, swamps, and other frequently flooded areas are in native vegetation and are used for wildlife habitat, recreation, and timber production. Most of the soils on the natural levees are used for cultivated crops, mainly sugarcane. There is no significant trend toward a change in land use.

Descriptions, names, and delineations of soils in this

Winters are warm and only occasionally interrupted by incursions of cool air from the north. Rains occur throughout the year, and precipitation is adequate for all crops.

Table 1 gives data on temperature and precipitation for the survey area as recorded at New Orleans, Louisiana in the period 1955 to 1977. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter the average temperature is 54 degrees F, and the average daily minimum temperature is 44 degrees. The lowest temperature on record, which occurred at New Orleans on January 24, 1963 is 14 degrees. In summer the average temperature is 81 degrees, and the average daily maximum temperature is 90 degrees. The highest recorded temperature, which occurred at New Orleans on June 27,1967 is 98 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50

gradually the acreage decreased. No cotton has been planted in recent years.

An increase in the production of sugarcane was the chief reason for decline of the cotton crop. Production became important after sugar granulation procedures were developed successfully in 1794. A few sugarcane plantations were established as early as 1803, but it was not until 1861 that sugarcane became the principal crop in the parish. Since then, most soils in the parish that are not subject to flooding have been used for the production of sugarcane. In 1980, 29,500 acres of sugarcane were planted in the parish.

The trend in agriculture is toward fewer, larger farm units. The total cropland acres has declined slowly. In 1969 there were 519 farms that averaged 394 acres each. In 1974 there were 356 farms that averaged 573 acres each. The acreage of soybeans is increasing, and the acreage in sugarcane is decreasing.

Bayou Lafourche

Bayou Lafourche, an important distributary of the Mississippi River, is the most significant physiographic feature in the parish. It flows southward through the

terminates at Golden Meadow. In addition, several state and hard surfaced roads are in the parish.

The parish is served by the Texas and Pacific Railroad on the east side of Bayou Lafourche as far south as Thibodaux. The east-west mainline of the Southern Pacific Railroad passes through Schriever and Lafourche Crossing and continues to New Orleans. Branch lines of the Southern Pacific Railroad serve the northern part of the parish on the west side of the bayou.

Airports near the towns of Thibodaux and Houma serve small private and commercial aircraft. The New Orleans International Airport is about 50 miles northeast of Thibodaux. Approximately 16 major airlines provide passenger and freight service at this facility.

Bayou Lafourche is the main navigable waterway in the parish. It connects with the Gulf Intracoastal Waterway at Larose and provides an outlet to the Gulf of Mexico. Other less important waterways are Field Lake, Long Lake, Harvey's Canal, Bayou Des Allemands, Lake Little, Caminada Bay, Bayou Paro, and Bayou Timbalier. Many smaller waterways have been constructed throughout the parish to transport oilfield supplies locally.

A large network of pipelines in the parish distributes raw natural gas and oil to major refineries in Louisiana and other states. The largest is a 48-inch pipeline that carries crude oil from the Louisiana Offshore Oil Port

Lafourche Parish because of the presence of saltwater in the aquifers. However, large quantities of saline water are available for some industrial cooling purposes (*9*).

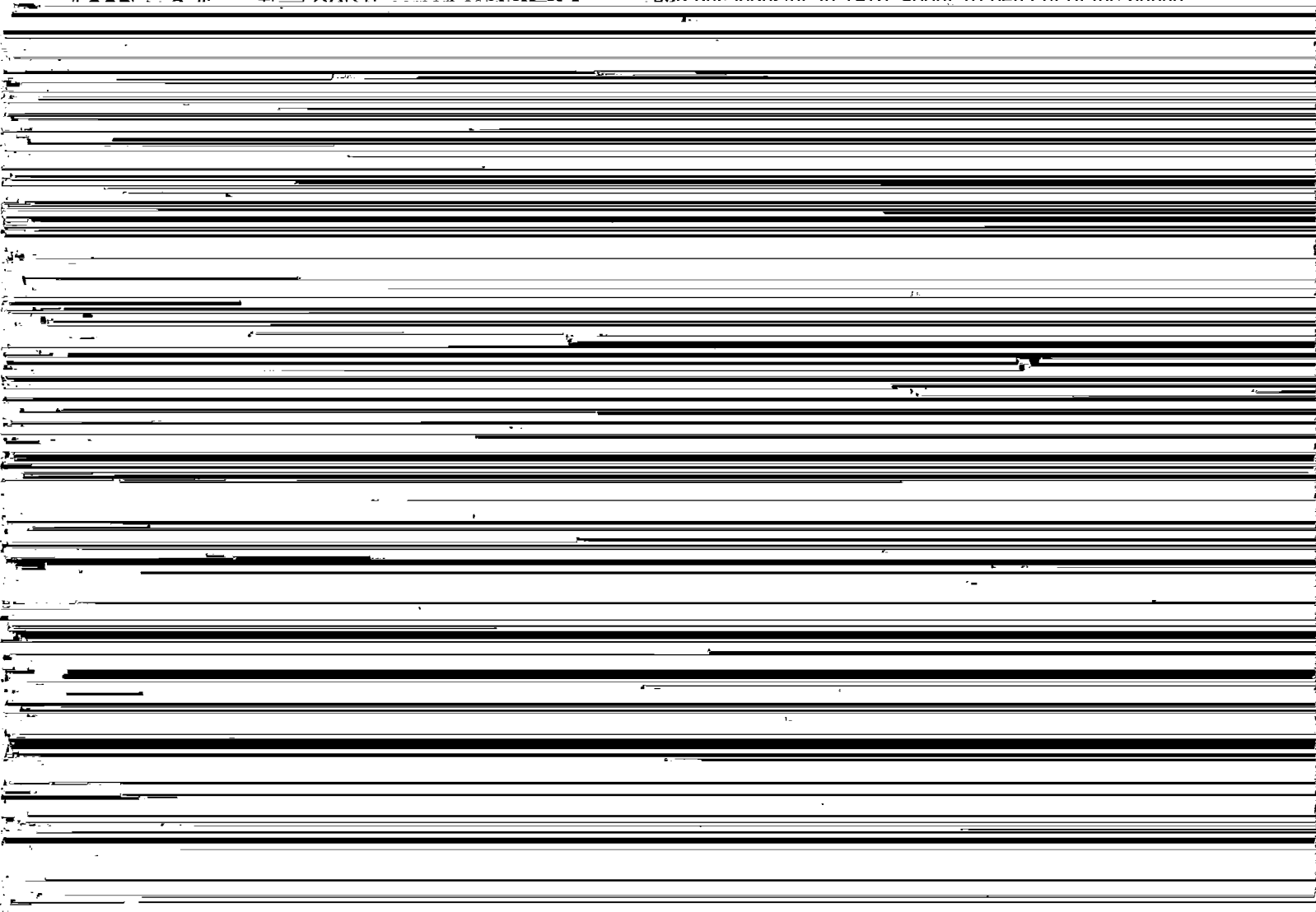
minerals

Many oil- and gasfields are scattered throughout Lafourche Parish. Some of these fields have been producing for more than 40 years. Additional wells are being drilled both within the parish and offshore in the Gulf of Mexico. In addition, two sulphur mines are in operation in the parish, one of which is just a few miles offshore.

During the period 1970 to 1973 the minerals produced in the parish, in order of their value, were petroleum, natural gas, sulphur, and natural gas liquid. In 1970, about 14 percent of the crude oil and 4.4 percent of the natural gas produced in Louisiana were produced in Lafourche Parish.

industry

The oil and gas industry, mainly the exploration for and production of petroleum and natural gas, is the major industry in Lafourche Parish. In addition, several local manufacturers produce tools and material used in the oil



The soil scientists recorded the characteristics of the profiles they studied and compared those profiles with others in nearby parishes and in more distant places. They classified and named the soils according to nationwide uniform procedures. They drew the

engineering tests. All soils are field tested to determine their characteristics. Interpretations of those characteristics may be modified during the survey. Data are assembled from other sources, such as test results, records, field experience, and state and local specialists.

general soil map units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils and some minor soils. It is named for the major soils. The soils making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The boundaries of the general soil map units in Lafourche Parish were matched, wherever possible, with those of previously published surveys of Assumption, Terrebonne, St. James, and St. John Parishes. In a few places, however, the lines do not join, and the names of the map units differ. These differences resulted mainly because of changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey area boundaries.

The general soil map units in this survey have been grouped into three general kinds of landscapes for interpretative purposes. Each of the broad groups and the soil map units in each group are described in the following pages. The terms for texture used in the title of several map units apply to the texture of the surface layer of the major soils.

Soils of the natural levees that are never flooded, rarely flooded, or occasionally flooded

The two map units in this group consist mainly of level, somewhat poorly drained and poorly drained, loamy and clayey soils that are on the natural levees of Bayou Lafourche. Most areas are above normal flood elevations, but some areas are rarely flooded or occasionally flooded.

These map units make up 16 percent of the land area of the parish. Most of the area is in cultivated crops. Occasionally flooded areas are mainly in woodland. Wetness and poor tilth are the main limitations where the soils are used for cultivated crops. Flooding is an additional limitation in areas of woodland.

1. Commerce

Level, somewhat poorly drained soils that are loamy throughout

This map unit consists of soils on high and intermediate positions on the natural levees of Bayou Lafourche and its distributaries. It is above normal flood elevations. Elevation ranges from about 5 to 15 feet above sea level. Slopes are long and smooth and less than 1 percent.

This map unit makes up about 7 percent of the land area of the parish. It is about 98 percent Commerce soils and 2 percent soils of minor extent.

The Commerce soils have a surface layer of dark grayish brown and dark gray silt loam and silty clay loam and a subsoil and underlying material of grayish brown silty clay loam, silt loam, and very fine sandy loam.

Of minor extent are the somewhat poorly drained Vacherie soils on intermediate positions where the natural levees of streams were breached by former floods.

Most of the soils in this map unit are used for cultivated crops. A small acreage is used for pasture and homesites. Sugarcane, soybeans, corn, small grains, and vegetables are the main crops.

This unit is well suited to cultivated crops and pasture. Wetness is the main limitation. A good surface drainage system and fertilizer are needed for crops and pasture.

This unit is well suited to southern hardwood production. It has few limitations. American sycamore, cherrybark oak, eastern cottonwood, green ash, and pecan are suitable trees.

This unit is moderately well suited to urban development. Wetness and moderate shrink-swell potential are the main limitations.

2. Sharkey

Level, poorly drained soils that have a loamy or clayey surface layer and a clayey subsoil

This map unit consists of soils on low and intermediate positions on the natural levees of Bayou Lafourche and its distributaries. Most of the soils are subject to rare

flooding. Some soils on low positions are occasionally flooded. Elevation ranges from about 1 foot to 5 feet above sea level. Slopes are long and smooth and less than 1 percent.

This map unit makes up about 9 percent of the land area of the parish. It is about 98 percent Sharkey soils and 2 percent soils of minor extent.

The Sharkey soils have a surface layer of very dark gray to very dark grayish brown clay and a subsoil of dark gray and gray clay. In some areas the surface layer is dark gray and very dark grayish brown silty clay loam.

Of minor extent are the somewhat poorly drained Commerce and Vacherie soils on intermediate positions and the poorly drained, frequently flooded Tunica soils on low positions.

Most of the rarely flooded soils in this map unit are used for cultivated crops and pasture. The occasionally flooded soils are mainly in woodland. Sugarcane, soybeans, grain sorghum, and rice are the main crops.

This unit is moderately well suited to cultivated crops and well suited to pasture. Wetness, flooding, and poor tilth are the main limitations. A good drainage system and fertilizer are needed for crops and pasture.

This unit is well suited to southern hardwood production. Wetness and flooding are the main limitations. American sycamore, cherrybark oak, eastern cottonwood, green ash, pecan, and sweetgum are suitable trees.

This unit is poorly suited to urban development. Wetness, flooding, very slow permeability, and very high

The Barbary soils are in the lowest positions on the map unit. They have a thin surface layer of very dark grayish brown, semifluid muck and underlying material of gray and dark greenish gray, semifluid clay.

The Fausse soils are on low natural levees of distributary channels. They have a surface layer of very dark grayish brown clay and a subsoil and underlying material of gray, dark gray, and greenish gray clay.

Of minor extent are the poorly drained Sharkey soils on narrow, low ridges.

Most of the soils in this map unit are in woodland and are used as habitat for wetland wildlife and for recreation. A small acreage is in oil and gas wells and in crawfish ponds.

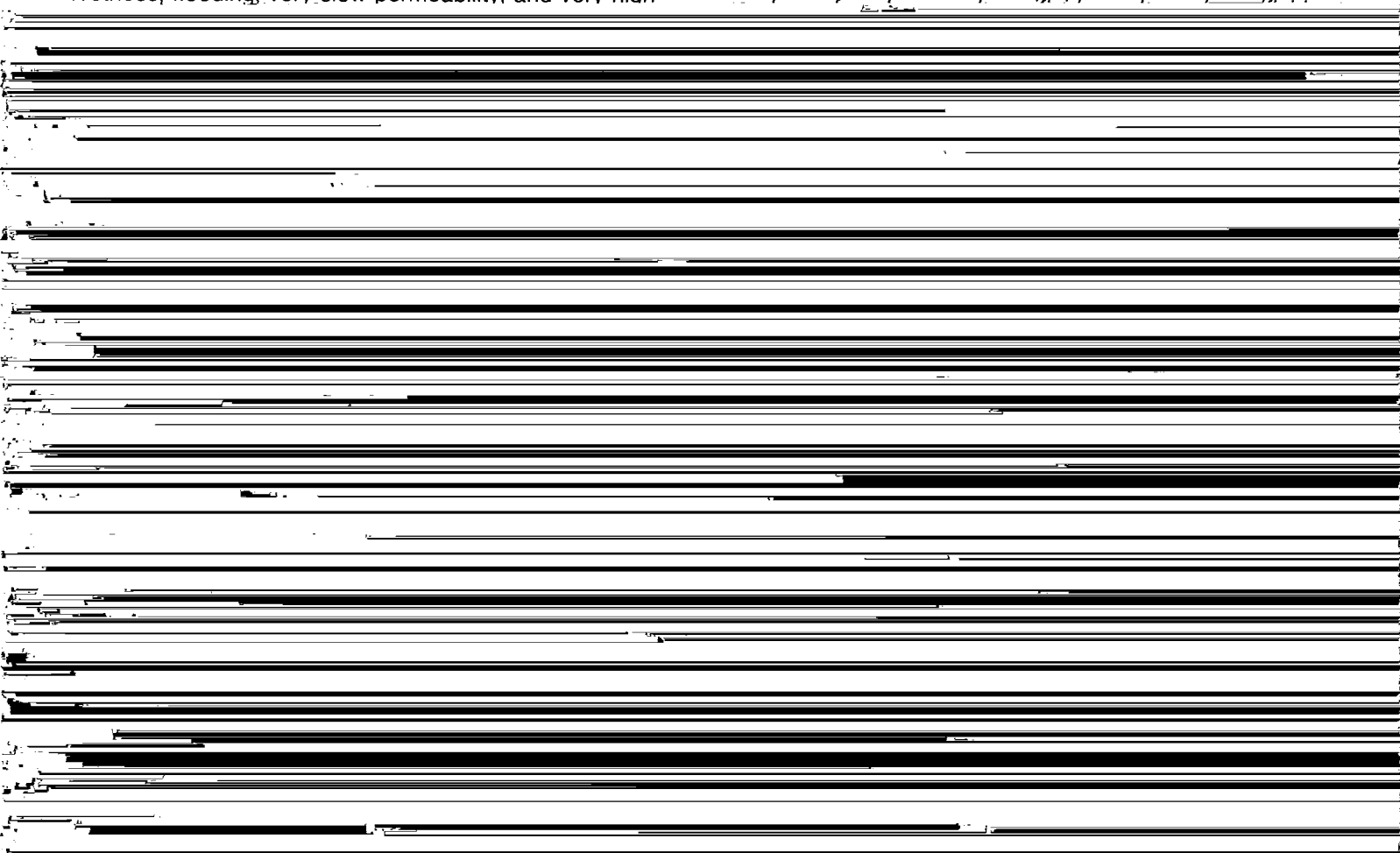
This unit is well suited to habitat for wetland wildlife and to recreation. It provides habitat for waterfowl, furbearers, alligators, squirrels, swamp rabbits, and nongame birds. Hunting and other outdoor activities are popular in areas of this unit.

This unit is poorly suited to southern hardwood production. Special equipment is needed to harvest trees because of wetness, flooding, and the low load supporting capacity of the soils.

This unit is not suited to cropland, pasture, or to urban development. The limitations of wetness, flooding, and low strength are too severe for these uses.

4. Allemands-Kenner-Larose

Level, very poorly drained soils that have a semifluid,



Most of the soils in this map unit are in native vegetation and are used as habitat for wetland wildlife and for recreation. A small acreage is in oil and gas wells.

This unit is well suited to wetland wildlife habitat. It provides habitat for many species of wetland wildlife and areas for hunting, fishing, and other outdoor activities.

6. Timbalier-Bellpass

Level, very poorly drained soils that have a semifluid, mucky surface layer and semifluid, clayey underlying material; in saline marshes

This map unit consists of soils in saline marshes that are ponded and flooded most of the time. Elevation ranges from sea level to 1 foot above sea level. Slope is

Timbalier soils in broad, interlevee basins. Many small ponds and perennial streams are in most areas.

Of minor extent are the poorly drained Sharkey soils on low ridges.

desirable because of wetness, low strength, and very high shrink-swell potential of the clayey layers. The Rita and Allemands, drained soils are poorly suited to urban uses because of wetness, very high shrink-swell potential, and high subsidence potential. All of the other general soil map units are not suited to urban uses because of flooding.

About 52 percent of the parish consists of marshes and is used mainly as habitat for wetland wildlife and for extensive forms of recreation. The Allemands-Kenner-Larose, Lafitte-Clovelly, Timbalier-Bellpass, and Scatlake general soil map units are in marsh. They are ponded and flooded most of the time. These map units provide suitable habitat for waterfowl, furbearers, alligators, and many species of nongame birds. In addition, the brackish and saline marshes are used as a nursery by estuarine-dependent fishes and crustaceans, such as sea trout, menhaden, croaker, spot, bay anchovy, blue crab, and shrimp. A large fishing and shrimping industry is dependent upon the fish and shrimp produced in these marshes.

detailed soil map units

The map units on the detailed soil maps at the back of this survey represent the soils in the survey area. The map unit descriptions in this section, along with the soil maps, can be used to determine the suitability of a soil for specific uses. They also can be used to plan the

The boundaries of the map units in Lafourche Parish were matched, wherever possible, with those of the published surveys of Assumption, St. James and St. John the Baptist, and Terrebonne Parishes. In a few places, however, there are some differences in the

of mineral material within the organic material in the upper part of the profile. The Larose soils have a thinner organic surface layer than the Allemands soil.

This Allemands soil is flooded with several inches of freshwater most of the time. During storms, floodwaters are as deep as 2 feet. During periods when the soil is not flooded, the water table ranges from 1 foot above the surface to 1/2 foot below the surface. This soil has a low load supporting capacity. Permeability is moderately rapid to rapid in the organic surface layer and very slow in the clayey underlying material. The total subsidence potential is high, and the shrink-swell potential is low in the organic surface layer and very high in the clayey underlying material.

The natural vegetation consists mainly of maidencane, bulltongue, alligatorweed, cattail, common rush, pickerelweed, southern wildrice, and swamp knotweed.

Most of the acreage of this soil is used as habitat for wetland wildlife and for extensive forms of recreation, such as hunting and fishing. A small acreage is used for oil and gas wells.

This Allemands soil is well suited to habitat for wetland wildlife. It provides roosting and feeding areas for ducks and many other types of waterfowl. This soil also provides habitat for crawfish, swamp rabbits, white-tailed deer, American alligators, and furbearers, such as nutria, mink, otters, and raccoons. Water-control structures for

this soil range from about 20 acres to several thousand acres. Slope is less than 0.5 percent.

Typically, the surface layer is very dark grayish brown, strongly acid muck about 20 inches thick. This layer has shrunk and cracked as it dried and remains cracked when rewetted. The underlying material to a depth of about 60 inches is dark gray, semifluid clay. It is slightly acid in the upper part and mildly alkaline in the lower part.

Included with this soil in mapping are a few small areas of soils similar to Allemands, drained soils, except that they have an organic surface layer that is only 5 to 10 inches thick. Also included are a few small areas of Allemands soil that have severely subsided and have a water table at the surface most of the time. These areas make up about 15 percent of this map unit.

This Allemands soil is drained and protected from flooding by a system of levees and water pumps. Under normal conditions, the water table is maintained at a depth of about 2 to 4 feet below the surface. After high intensity rains of long duration, however, the water table is near the surface for short periods. Flooding is rare but can occur during hurricanes or other severe storms. Permeability is rapid in the organic surface layer and in the cracks and very slow in the clayey underlying material. Even if the cracks in the surface layer have been covered with mineral fill material, they remain open in the underlying material. Water and air move freely

This soil is poorly suited to urban development and to intensive forms of recreation. Flooding, wetness, subsidence, low strength, and very high shrink-swell potential are the main limitations. Flooding is rare but occurs during hurricanes and if water pumps and protection levees fail. If the water table is lowered, the organic material oxidizes and slowly subsides. In places, buried logs and stumps cause uneven subsidence. The organic layers are subject to burning when dry. If this soil is used for dwellings, specially designed foundations and piling are needed. Removing the organic material and replacing it with suitable mineral material or preloading the surface with mineral material can also help to reduce wetness and improve the load supporting capacity of the soil where buildings, local roads and streets, or playgrounds are constructed. Community sewage systems are needed to prevent contamination of water supplies as a result of seepage. Drainage ditches and levees are difficult to construct and maintain because of the semifluid nature of the underlying mineral material and subsidence of the organic material.

This soil is moderately well suited to openland wildlife habitat and well suited to wetland wildlife habitat. Habitat can be created or improved by establishing desirable plants. Water control structures designed for management of habitat are difficult to construct and maintain because of the subsidence potential and semifluid nature of the underlying material.

This Allemands soil is in capability subclass IVw. It is not placed in a woodland group.

AN—Allemands-Larose association. These level, very poorly drained, semifluid, organic and mineral soils are in freshwater marshes. They are ponded and flooded most of the time. The Allemands soil is in broad basins, and the Larose soil is along the lower edge of distributary ridges and on top of ridges that have subsided below the surface of the marsh. The Allemands soil makes up about 45 percent of the association and the Larose soil about 40 percent. Areas of this association range from 200 to several thousand acres. The number of observations made in these areas was fewer than in other areas because of poor accessibility.

swell potential. Permeability is moderately rapid to rapid in the organic surface layer and very slow in the clayey underlying material. The total subsidence potential is high.

Typically, the Larose soil has a surface layer of very dark gray, medium acid, semifluid muck about 5 inches thick. The next layer is dark gray, slightly acid, semifluid clay about 10 inches thick. Below that is about 21 inches of gray, neutral, semifluid clay. The underlying material to a depth of about 84 inches is dark gray and greenish gray, mildly alkaline and moderately alkaline, semifluid clay.

The Larose soil is almost continuously flooded with several inches of water. During storms, floodwaters are as deep as 3 feet. During periods when the soil is not flooded, the water table ranges from 2 feet above the surface to 1/2 foot below the surface. This soil has low strength. It is continuously saturated with water and is semifluid throughout. This soil has very high shrink-swell potential. Permeability is very slow. Natural fertility is high, and the content of organic matter is very high. Available water capacity is high. The total subsidence potential is medium.

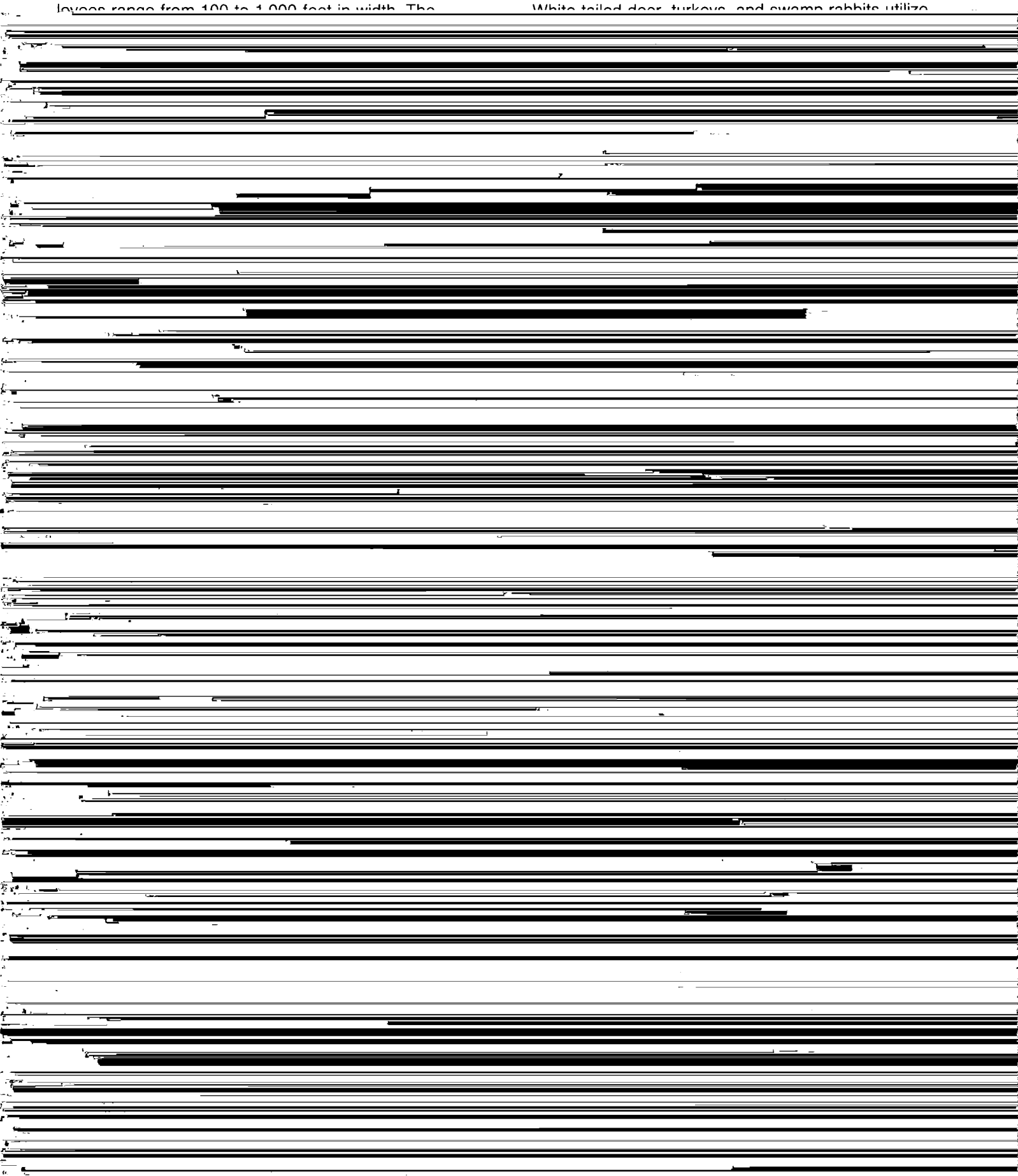
Included with these soils in mapping are a few small areas of Kenner soils. Also included are many small ponds and perennial streams. These areas make up about 15 percent of the map unit. The Kenner soils are in positions similar to those of Allemands soils and have thin layers of mineral material within the organic material in the upper part of the profile.

The natural vegetation of the Allemands and Larose soils consists mainly of maidencane, bulltongue, alligatorweed, cattail, common rush, pickerelweed, southern wildrice, and swamp knotweed (fig. 2).

Most of the acreage of these soils is used as wetland wildlife habitat and for extensive forms of recreation. A small acreage is oil- and gasfields.

These soils are well suited to wetland wildlife habitat. They provide habitat for large numbers of ducks and many other types of waterfowl and are also suitable habitat for crawfish, alligators, swamp rabbits, deer, nutria, mink, otters, and raccoons. Water control structures, designed for intensive wildlife management,

levees range from 100 to 1,000 feet in width. The White tailed deer, turkeys, and swamp rabbits utilize



The Scatlake soil is almost continuously flooded with several inches of saltwater. During storms, it is covered by tidal waters that range in depth from 1 foot to 3 feet. During periods when the soil is not flooded, the water table ranges from 1 foot above the surface to 1/2 foot below the surface. This semifluid soil has low strength and poor trafficability. Permeability is very slow. Natural fertility and content of organic matter are high. Available water capacity is high. The total subsidence potential is medium. The shrink-swell potential is very high.

Included with these soils in mapping are a few small areas of Timbalier soils and many small ponds and perennial streams. These areas make up less than 20 percent of this map unit. The Timbalier soils have an organic surface layer more than 51 inches thick and are

of the natural levees along Bayou Lafourche and its distributaries. Areas of this soil range from 15 to 1,000 acres. Slope is less than 1 percent.

Typically, the surface layer is about 15 inches thick. It is dark grayish brown, neutral silt loam in the upper part and dark gray, neutral silt loam in the lower part. The subsoil to a depth of about 36 inches is grayish brown, mottled silt loam and silty clay loam. It is neutral in the upper part and moderately alkaline in the lower part. The underlying material to a depth of about 60 inches is grayish brown, mottled, moderately alkaline very fine sandy loam.

Included with this soil in mapping are a few small areas of Commerce silty clay loam. These areas make up about 15 percent of the unit, but individual areas

Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic tank absorption fields. If outlets are available, these limitations can be overcome by providing drainage and by increasing the size of the absorption field. Low strength is a limitation where this soil is used for local roads and streets. Adding sand or other suitable fill material to the road base helps to overcome low strength.

This soil is moderately well suited to intensive use for recreation areas. Wetness is the main limitation. Shallow ditches, land smoothing, and grading help to remove excess surface water in intensively used areas, such as playgrounds. Plant cover can be maintained in these areas by the application of fertilizer and by controlling traffic.

This soil is well suited to openland and woodland wildlife habitat and moderately well suited to wetland wildlife habitat. Habitat for openland and woodland wildlife can be improved by planting appropriate vegetation or by helping the natural establishment of desirable plants. Habitat for wetland wildlife can be improved by excavating shallow water areas for use by waterfowl and furbearers.

This Commerce soil is in capability subclass IIw and woodland group 1w5.

Co—Commerce silty clay loam. This level, somewhat poorly drained, firm, mineral soil is on intermediate positions on the natural levees along Bayou Lafourche and its distributaries. Areas range from 15 to 1,000 acres. Slope is less than 1 percent.

Typically, the surface layer is dark gray, neutral silty clay loam about 11 inches thick. The subsoil to a depth of about 34 inches is grayish brown, mottled, and moderately alkaline. It is silt loam in the upper part and

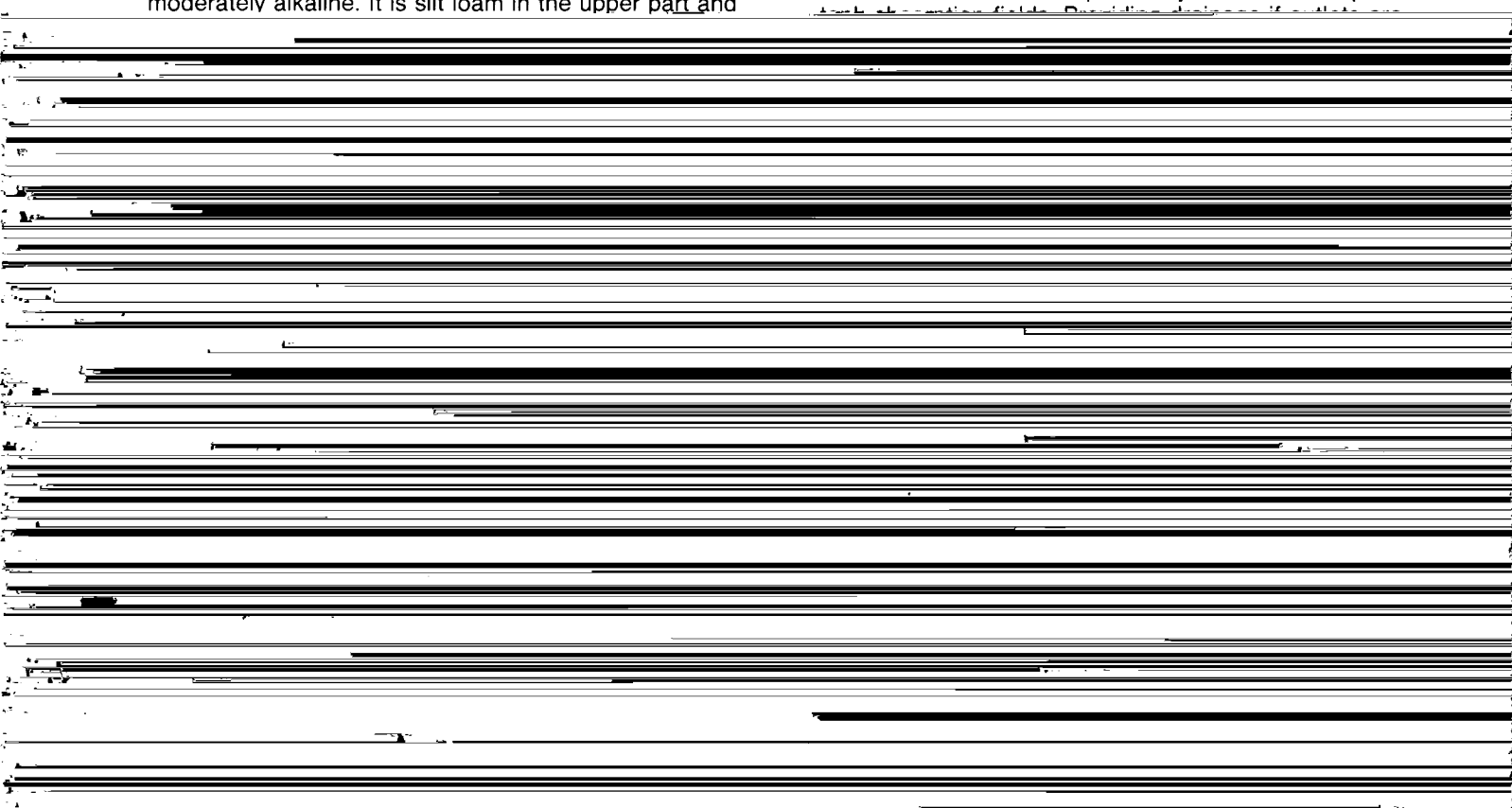
Most of the acreage of this soil is used for crops. A small acreage is in pasture or woodland or is used for homesites.

This soil is well suited to cultivated crops, mainly sugarcane, soybeans, corn, and truck crops (fig. 4). The surface layer is somewhat difficult to keep in good tilth. It is slightly sticky when wet and hard when dry and can be worked only within a somewhat narrow range of moisture content. Wetness is a limitation. Land grading and smoothing and constructing field ditches help to remove excess surface water. Proper management of crop residue and minimum tillage improve tilth and reduce soil losses from erosion. Most crops other than legumes respond well to nitrogen fertilizer. Sugarcane also responds well to potassium fertilizer.

This soil is well suited to pasture. Common bermudagrass, improved bermudagrass, bahiagrass, johnsongrass, tall fescue, southern wild winter peas, vetch, red clover, and white clover are suitable pasture plants. Grasses and legumes respond well to fertilizer. Lime is generally not needed. The use of proper stocking rates, pasture rotation, and restricted grazing during wet periods help to keep the pasture and the soil in good condition.

This soil is well suited to woodland. The potential for hardwood trees is very high. American sycamore, cherrybark oak, eastern cottonwood, green ash, sweetgum, and pecan are suitable trees.

This soil is moderately well suited to urban uses. Wetness and moderate shrink-swell potential are the main limitations for dwellings without basements. Installing a drainage system and using proper engineering designs can overcome these limitations. Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic



underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

This Sharkey soil is flooded frequently for brief to long periods from December to June. The depth of floodwaters is generally less than 1 foot. During periods when the soil is not flooded, the water table fluctuates between the surface and a depth of 2 feet below the surface. This soil has very high shrink-swell potential. When dry, it has cracks that are 1 centimeter or more wide at a depth of 20 inches that extend upward to the surface. Permeability is very slow. Natural fertility is high, and content of organic matter is moderate. Available water capacity is high to very high.

Included with these soils in mapping are a few small areas of very poorly drained Barbary soils in deep depressions. Also included are soils similar to Sharkey soil except that they are not subject to flooding. These

designed to overcome the limitations of very high shrink-swell potential and low strength.

Unless drained and protected from flooding, these soils are not suited to cropland or pasture.

These Fausse and Sharkey soils are in capability subclass VIIw. The Fausse soil is in woodland group 4w6, and the Sharkey soil is in woodland group 3w6.

FE—Felicity loamy fine sand, frequently flooded. This very gently sloping, somewhat poorly drained, saline, sandy soil is on low ridges along the coast of the Gulf of Mexico. Elevations range from about 1 foot to 3 feet above sea level. This soil is subject to flooding by saltwater during high storm tides. Areas are long and narrow and range from 100 to 200 acres. The number of observations made in these areas was fewer than in

rush, pickerelweed, southern wildrice, and swamp knotweed.

Most of the acreage of this soil is used as wetland wildlife habitat and for extensive forms of recreation. A small acreage is oil- and gasfields.

This soil is well suited to wetland wildlife habitat and

provide access for hunters, fishermen, and trappers. Many species of freshwater fish are in the small ponds and perennial streams. Intrusion of saltwater is a problem in managing the vegetation for wetland wildlife habitat. Water control structures designed to improve the habitat for wildlife are difficult to construct and maintain

saltwater after storms, subsidence, and low strength are continuing problems.

This soil is not suited to woodland. A permanent high water table, flooding, and low strength are the main limitations. Black willow is the main native tree in drained areas.

This soil is not suited to urban uses and to intensive

Also included are many small ponds and perennial streams. These areas make up about 10 percent of the map unit.

The natural vegetation on the Lafitte and Clovelly soils consists mainly of marshhay cordgrass, coastal waterhyssop, dwarf spikerush, Olney bulrush, and saltmarsh morningglory.

water table is maintained at a depth of 2 to 3 feet below the surface. After high intensity rains of long duration, however, the water table is near the surface for short periods. Flooding is rare and occurs only during hurricanes or other severe storms. Water and air move very slowly through the soil and rapidly through the network of permanent cracks in the subsoil. The available water capacity is moderate to high. This soil has medium fertility. The content of organic matter is very high. The total subsidence potential is medium. The upper part of the soil typically becomes increasingly acid as the organic matter decomposes. In places where the soil has subsided, the water table is near the surface

This soil is well suited to wetland wildlife habitat and moderately well suited to openland wildlife habitat. Habitat for openland wildlife habitat can be improved by maintaining vegetated areas for wildlife cover. Shallow ponds can be constructed to provide open water areas for use by waterfowl and furbearers.

This Rita soil is in capability subclass IIIw. It is not placed in a woodland group.

Rv—Rita Variant muck. This level, poorly drained, firm, mineral soil is in freshwater marshes that are drained and protected from most floods. Areas are mainly along the east side of Bayou Lafourche and

grazing during wet periods helps to keep the pasture and [redacted]

waterways provide access for fishing, shrimping, hunting

[redacted]

properly during rainy periods because of wetness and very slow permeability. Using sandy backfill in the trenches and providing long absorption lines help to overcome these limitations. In areas where housing density is moderate to high, community sewage systems are needed. Drainage should be provided for intensively

increase the content of organic matter, improve tilth, and reduce soil losses from erosion. Most crops other than legumes respond well to applications of nitrogen fertilizer. Lime is generally not needed. Irrigation is needed if rice is grown.

This soil is well suited to pasture. Bahiagrass,

about 22 inches is dark gray, mottled, neutral clay. The next layer to a depth of about 46 inches is gray, mildly alkaline clay. The lower layer to a depth of about 60 inches is dark gray, moderately alkaline clay.

Included with this soil in mapping are a few small areas of Fausse soils. Also included are a few small areas of Sharkey soils on higher positions that are not subject to flooding. These areas make up about 10 percent of this map unit. The very poorly drained Fausse soils are in depressions.

This Sharkey soil has high fertility. Runoff is very slow. Permeability is very slow. Wetness causes poor aeration [illegible] root development of many plants. This soil

wildlife habitat. Habitat for wetland wildlife can be improved by excavating shallow water areas for use by waterfowl and furbearers, and habitat for openland and woodland wildlife can be improved by maintaining undisturbed areas of permanent vegatation. The hunting of deer, squirrels, and swamp rabbits and the trapping of furbearers are popular in wooded areas.

This soil is poorly suited to urban uses and to intensive forms of recreation. Flooding, very high shrink-swell potential, and wetness are the main limitations. Drainage and protection from flooding are needed for most urban uses. In addition, buildings and roads should [illegible]

levees of linear distributary channels that have subsided below sea level. These soils are semifluid and clayey throughout the upper part of the profile.

The natural vegetation of the Timbalier and Bellpass soils consists mainly of smooth cordgrass, seashore saltgrass, needlegrass rush, marshhay cordgrass, bushy sea-oxeye, Virginia samphire and saltwort.

Most of the acreage of these soils is used as wetland wildlife habitat and for extensive forms of recreation. A small acreage is oil- and gasfields.

These soils are well suited to wetland wildlife habitat. They are part of the estaurine complex that contributes to the support of Gulf marine life and are an important

clay throughout. The Sharkey soils are on slightly lower positions and are clayey throughout.

This Tunica soil has high fertility. Runoff is slow. Permeability is very slow. Wetness causes poor aeration and restricts root development of many plants. This soil is subject to frequent flooding. As much as 2 feet of water stands on the surface for brief to long periods from January to June. The water table fluctuates between a depth of 1 1/2 and 3 feet below the surface from January to April. The shrink-swell potential is high. The soil cracks when dry and seals over when wet. Available water capacity is moderate.

Most the acreage of this soil is used for pasture. A

the clay underlying material is at a depth ranging from about 10 to 20 inches below the surface.

Included with this soil in mapping are a few small areas of Commerce soils. These areas make up about 15 percent of the map unit, but individual areas generally are less than 3 acres. The Commerce soils are on higher parts of the natural levees than Vacherie soils and are loamy throughout.

This Vacherie soil has high fertility. Permeability is moderate through the loamy upper part of the profile and very slow through the clayey lower part. Runoff is slow. The surface layer and subsoil are wet for long periods during winter and spring. The seasonal high water table fluctuates between a depth of 1 foot and 3 feet below the surface during the months of December to April. Available water capacity is moderate to high. The content of organic matter is low to moderate. The shrink-swell potential is low in the loamy upper part of the profile and very high in the lower part.

Most of the acreage of this soil is used for cultivated crops. A small acreage is in pasture or is used for homesites.

This soil is well suited to cultivated crops, mainly sugarcane, soybeans, corn, small grains, and truck crops. It is friable and easy to keep in good tilth. Trafficpans develop easily but can be broken up by chiseling or deep plowing. Wetness is the main limitation. Proper row arrangement, field ditches, and vegetated outlets help to remove excess surface water. Land smoothing improves surface drainage; however, deep cutting may expose the clayey underlying material. Minimum tillage and leaving crop residue on the soil or adding other organic matter improves fertility and helps maintain tilth and the content of organic matter. Crops respond well to applications of fertilizer. Lime is generally not needed.

This soil is well suited to pasture. Common bermudagrass, improved bermudagrass, johnsongrass, bahiagrass, tall fescue, white clover, vetch, red clover, improved by excavating shallow water areas for use by waterfowl and furbearers.

This soil is poorly suited to urban uses and to intensive forms of recreation. Wetness, very high shrink-swell potential, low strength, and very slow permeability are the main limitations. Excess surface water can be removed by constructing shallow ditches for drainage and by providing the proper grade. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Using sandy backfill in the trenches and providing long absorption lines help to overcome these limitations. Buildings and roads can be designed to offset the effects of shrinking and swelling. Good drainage should be provided for intensively used recreation areas, such as playgrounds. Plant cover can be maintained by applications of fertilizer and by controlling traffic.

This Vacherie soil is in capability subclass IIw and woodland group 1w5.

prime farmland

Prime farmland is one of several kinds of important farmlands defined by the U.S. Department of Agriculture. It is of major importance in providing the nation's short- and long-range needs for food and fiber. The supply of high quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, state, and federal levels, as well as individuals, must encourage and facilitate the wise use of our nation's prime farmland.

Prime farmland soils, as defined by the U. S. Department of Agricullture, are soils that are best suited to producing food, feed, forage, fiber, and oilseed crops. Such soils have the quality, length of growing season, and moisture supply needed to economically produce high yields of crops. Prime farmland soils produce the highest yields with minimal inputs of energy and economic resources, and farming these soils results in the least damage to the environment.

Areas are scattered throughout the parish. About 48,000 acres of this prime farmland soil is used for crops.

The trend in land use to urban and related uses has resulted in the loss of some prime farmland. This loss puts pressure on marginal land, which generally is more erodible, droughty, or difficult to cultivate, and usually is less productive than prime farmland.

Urban and built-up land is any contiguous unit of land of 10 acres or more that is used for residential, industrial, commercial, construction, institutional, and public administrative sites, and railroad yards, small parks, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures and spillways, and other uses.

The soils that make up prime farmland in Lafourche Parish are listed in this section. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps in the back of this publication. The soil qualities that affect use and management are described in the section 'Detailed soil map units.' This list does not constitute a recommendation for a particular land use.

Soils that have limitations, such as a seasonal high water table, a hazard of flooding, or inadequate moisture, may qualify as prime farmland if these limitations are overcome by the installation of drainage or by flood control measures. However, only those soils that have few limitations and need no additional improvements to qualify for prime farmland are included.

The following map units meet the soil requirements for prime farmland.

Cm	Commerce silt loam
Co	Commerce silty clay loam
Sh	Sharkey silty clay loam
Sk	Sharkey clay
Va	Vacherie silt loam

use and management of the soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help avoid

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under "Detailed soil map units." Specific information can be obtained from the

The soils in Lafourche Parish that are used for cultivated crops generally range in reaction from medium acid to moderately alkaline in the upper 20 inches. They generally do not require additions of lime. The drained marshes, however, contain highly oxidized organic material and have clayey surface layers that range to extremely acid. Most of these drained marsh soils were once used for row crops but are now in pasture.

Organic matter content. Organic matter is important as a source of nitrogen for crop growth and is also important in increasing the water intake rate, reducing surface crusting and soil loss by erosion, and in providing good tilth. It promotes the growth of larger plants and plants that have more extensive root systems. Most of the soils in Lafourche Parish that are used for cropland are moderately low in organic matter content.

Organic matter can be built up to a limited extent and maintained by leaving plant residue on the soil, adding barnyard manure, and growing perennial grasses and legumes in rotation with other crops. In this parish, the use of sugarcane residue is especially important in helping to maintain the organic matter content.

Soil tillage. Soil tillage prepares the seedbed and controls weeds. Seedbed preparation and cultivating and that occur in summer have a distribution pattern that favors the growth of sugarcane. However, this rainfall pattern precludes the economical production of certain crops, for example, cotton, which is better suited to a drier climate. The available water capacity of soils suited to crops is high or very high.

Cropping system. A desirable combinaton of crops in a good cropping system includes a legume to add nitrogen to the soil, a cultivated crop to aid in weed control, a deep-rooted crop to utilize substratum fertility and maintain substratum permeability, and a close-growing crop to help maintain organic matter content. In a good cropping system, the sequence of crops should be such that the soil is covered as much of the year as possible.

In this parish, three crops of sugarcane are generally obtained from each planting. After the third crop, the field is planted to soybeans or more commonly is fallowed for a year. The organic matter content of the soil can be maintained at a desirable level under this system by properly utilizing the sugarcane residue.

A suitable cropping system varies with needs of the farmer as well as needs of the soil. Producers of livestock, for example, generally use cropping systems that have a higher percentage of pasture than producers of cash crops. Additional information on cropping

and seeding rates; suitable high-yielding crop varieties; Class VI soils have severe limitations that make them

require the same general management and have about the same potential productivity.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for important trees. The number 1 indicates very high productivity; 2, high; 3, moderately high; 4, moderate; and 5, low. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *x* indicates stoniness or rockiness; *w*, excessive water in or on the soil; *t*, toxic substances in the soil; *d*, restricted root depth; *c*, clay in the upper part of the soil; *s*, sandy texture; *f*, high content of coarse fragments in the soil profile; and *r*, steep slopes. The letter *o* indicates that limitations or restrictions are insignificant. If a soil has more than one limitation, the priority is as follows: x, w, t, d, c, s, f, and r.

The third element in the symbol, a numeral, indicates the kind of trees for which the soils in the group are best suited and also indicates the severity of the hazard or limitation. The numerals 1, 2, and 3 indicate slight, moderate, and severe limitations, respectively, and suitability for needleleaf trees. The numerals 4, 5, and 6

and the ability of the soil to hold trees firmly. A rating of *slight* indicates that a few trees may be blown down by normal winds; *moderate*, that some trees will be blown down during periods of excessive soil wetness and strong winds; and *severe*, that many trees are blown down during periods of excessive soil wetness and moderate or strong winds.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index*. This index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. Site index was calculated at age 30 years for eastern cottonwood, 35 years for American sycamore, and 50 years for all other species. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Trees to plant are those that are suited to the soils and to commercial wood production.

Camp areas require site preparation such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have mild slopes and are not wet or subject to flooding during the period of use. The surface absorbs rainfall readily but remains firm, and is not dusty when dry.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet

Three types of marsh, based on levels of salinity and types of vegetation, are in Lafourche Parish. They are fresh, brackish, and saline marshes, in order of increasing salinity. The kinds and population densities of wildlife utilizing any part of the marsh depend to a large extent upon the levels of salinity and the kind of native plants. The location and extent of the soils in each of these types of marsh is shown on the General Soil Map in the back of this survey.

Native plants in the marshes differ in their tolerance to salt. Therefore, the composition of the plants growing in an area indicates the type of marsh and approximate

American alligators, and swamp rabbits utilize the brackish marsh. White-tailed deer also use this area. The brackish marsh is part of the estuary that provides a nursery for some species of fish and crustaceans.

The fresh marsh is in the northernmost part of the

Areas of fresh marsh provide habitat for large numbers of crawfish, ducks, nutria, mink, otters, raccoons, swamp rabbits, white-tailed deer, and American alligators. Moderate numbers of geese also utilize the fresh marsh. The fresh marsh has the lowest muskrat population and

listed in table 7. These soils provide habitat for large numbers of mink, otters, raccoons, crawfish, squirrels, wood ducks, and migratory ducks, alligators, wading birds, and other nongame birds. Deer, cottontails, swamp

of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates

plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include bobwhite quail, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to (1) evaluate the potential of areas for residential, commercial, industrial, and recreation uses; (2) make preliminary estimates of construction conditions; (3) evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; (4) evaluate alternative sites for sanitary landfills

placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground water pollution. Ease of excavation and revegetation need to be considered.

The ratings in table 12 are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, slope, and flooding affect both types of landfill. Texture, highly organic layers, soil reaction, and content of salts and sodium affect trench type landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated

Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by a high water table and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable

area is affected by slope, a water table, and toxic material.

Soils rated *good* have friable loamy material to a depth of at least 40 inches. They have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, or soils that have only 20

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include

soil properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory

adopted by the American Association of State Highway and Transportation Officials (*1*).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy soils are identified as SM and silty and clayey soils as ML, CL, MH, CH, and OH; and highly organic soils as Pt. Soils exhibiting engineering

physical and chemical properties

Table 16 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

can occur without affecting crop productivity over a [redacted] Frequency, duration, and probable dates of occurrence

Subsidence takes place gradually, usually over a period of several years. Table 17 shows the expected initial subsidence, which usually is a result of drainage, and annual subsidence, which usually is a result of oxidation and consolidation.

Not shown in the table is subsidence caused by an imposed surface load or by the withdrawal of ground water throughout an extensive area as a result of

concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors creates a severe corrosion environment. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

classification of the soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (*11*). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. In table 18, the soils of the survey area are classified according to the system. The categories are defined in the following paragraphs.

ORDER. Ten soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Entisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquent (*Aqu*, meaning water, plus *ent*, from Entisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, depth of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is very fine, montmorillonitic, nonacid, thermic Typic Haplaquents.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

soil series and their morphology

In this section, each soil series recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each series. The soil is compared with similar soils and with nearby soils of other series. A pedon, a small three-dimensional area of

Allemands soils commonly are near Barbary, Bellpass, to 10 percent after rubbing. Reaction ranges from slightly

the A1 horizon, and from neutral to moderately alkaline in the C horizon.

The O2 horizon has hue of 10YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2. It is peat or muck.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. It is mucky clay or clay.

The C horizon has hue of 10YR, 5Y, 2.5Y, 5BG, and 5GY, value of 4 or 5, and chroma of 1. Few to many buried logs, stumps, and wood fragments are in the C horizon.

Rollpass series

IIC1g—32 to 58 inches, dark greenish gray (5BG 4/1) clay; massive; flows easily between fingers when squeezed leaving hand empty; moderately alkaline; clear smooth boundary.

IIC2g—58 to 74 inches; dark greenish gray (5BG 4/1) clay; massive; flows slowly between fingers when squeezed leaving a small residue; moderately alkaline; clear smooth boundary.

The thickness of the organic soil material ranges from 16 to 51 inches. The organic material is dominantly from herbaceous plants. Reaction of the organic layers ranges

Oa1—0 to 12 inches; very dark grayish brown (10YR 3/2) muck; massive; about 20 percent fiber, 5 percent rubbed; about 60 percent mineral; many medium and coarse roots and stems; flows easily between fingers leaving only fiber and roots in hand; moderately alkaline; clear smooth boundary.

Oa2—12 to 26 inches; black (10YR 2/1) [illegible]

Typical pedon of Commerce silt loam, 1.5 miles southeast of old Highway 90, 210 feet northeast of Highway 308, 70 feet northeast of field road, sec. 37, T. 16 S., R. 19 E.

Ap1—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; [illegible]

level to about 5 feet above sea level. Slope is less than 0.5 percent.

Soils of the Fausse series are very-fine, montmorillonitic, nonacid, thermic Typic Fluvaquents.

Fausse soils commonly are near Barbary and Sharkey

Typical pedon of Felicity loamy fine sand, frequently flooded, 10 miles south of Leeville, 0.3 mile southwest of end of Highway 3090, on beach of the Gulf of Mexico, NW1/4NW1/4, sec. 25, T. 23 N., R. 22 E.

C1—0 to 12 inches; grayish brown (10YR 5/2) loamy

Typical pedon of Kenner muck, 4.5 miles northeast of Raceland, 300 feet southwest of the camp on Foret Canal:

Soils of the Lafitte series are euic, thermic Typic Medisaprists.

Lafitte soils are similar to Kenner and Timbalier soils and commonly are near Clovelly soils. The Clovelly soils

The IICg horizon has hue of 5Y and 5GY, value of 4 or 5, and chroma of 1. It is semifluid clay or silty clay. Some pedons have thin organic layers within the IICg horizon.

Larose series

The Larose series consists of very poorly drained, very slowly permeable, semifluid, mineral soils that formed in thin, herbaceous muck over clayey alluvium. These soils are in freshwater marshes that are ponded and flooded most of the time. Elevation ranges from sea level to about 1 foot above sea level. Slope is less than 0.2 percent.

Soils of the Larose series are very-fine, montmorillonitic, nonacid, thermic Typic Hydraquents.

Larose soils commonly are near Allemands, Barbary, Fausse, Kenner, Scatlake, and Sharkey soils. The Allemands soils have an organic surface layer that is more than 16 inches thick. Barbary soils are in nearby swamps and have stumps and logs within their profiles

between fingers when squeezed leaving hand empty; moderately alkaline; clear wavy boundary.

C4g—60 to 84 inches; gray (5Y 5/1) clay; massive; flows easily between fingers when squeezed leaving hand empty; moderately alkaline.

All mineral horizons to a depth of 60 inches have an n value of 1 or more. Reaction ranges from medium acid to mildly alkaline in the O and A horizons and from slightly acid to moderately alkaline in the C horizon. Where this soil is drained, reaction of the O and A horizons ranges from extremely acid to medium acid.

The O horizon has hue of 10YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2. It is 2 to 15 inches thick.

The A horizon has hue of 10YR, 2.5Y or 5Y, value of 3 or 4, and chroma of 1 or 2, or it is neutral. It is clay, silty clay, or mucky clay.

The C horizon has hue of 10YR, 5Y, 5GY, or 5BG, value of 3 to 5, and chroma of 1 or 2, or it is neutral. It is

IIB21g—4 to 18 inches; gray (10YR 5/1) clay; common distinct streaks of strong brown (7.5YR 5/6) 2 to 3 millimeters wide along root channels and as patchy coatings on faces of peds; moderate medium subangular blocky structure; firm and plastic; common fine roots concentrated between peds; few fine tubular pores; few vertical cracks as much as 5 millimeters in diameter filled with black muck; extremely acid; clear boundary.

IIB22g—18 to 26 inches; gray (10YR 5/1) clay; many medium and coarse distinct strong brown (7.5YR 5/6) mottles and few coarse distinct dark brown (7.5YR 4/4) mottles on faces of peds; weak coarse subangular blocky structure; sticky and plastic; few fine tubular pores; medium acid; clear wavy boundary.

IIB23g—26 to 30 inches; greenish gray (5BG 5/1) clay; few fine distinct dark yellowish brown (10YR 4/4) mottles along root channels and on faces of peds; weak thick platy structure; firm; few fine tubular

Rita Variant

The Rita Variant consists of poorly drained, very slowly permeable, firm, mineral soils that have permanent cracks in the upper part of the subsoil. These soils formed in thin, organic accumulations over clayey alluvium. They are in freshwater marshes that have been drained and protected from flooding. Elevation ranges from 2 to 3 feet below sea level. Slope is less than 0.5 percent.

Rita Variant differs from Rita soils in having a more acid control section.

Soils of the Rita Variant are very-fine, montmorillonitic, acid, thermic, cracked Hydric Fluvaquents.

Rita Variant soils commonly are near Allemands, drained, Rita, and Sharkey soils. Allemands, drained soils have a thicker organic surface layer than Rita Variant soils. Rita soils are more alkaline in the control section. The Sharkey soils are on higher positions and do not have permanent cracks in the subsoil.

The IIBg horizon has hue of 10YR, 5Y, 5BG, 5GY or 5G, value of 3 to 5, and chroma of 1, or it is neutral. It is clay or silty clay. Vertical cracks in this horizon do not close when the soil is wet.

The IICg horizon has a color range similar to that of the IIBg horizon. It is clay, silty clay, or silty clay loam.

The IIICg horizon has a color range similar to that of the IIBg and IIICg horizons. It is silt loam, very fine sandy loam, fine sandy loam, or loamy very fine sand.

Scatlake series

The Scatlake series consists of very poorly drained, very slowly permeable, saline, semifluid, mineral soils. These soils are in saline marshes that are ponded and flooded most of the time. They formed in unconsolidated, clayey and organic sediment. Elevation ranges from sea level to about 1 foot above sea level. Slope is less than 0.5 percent.

Soils of the Scatlake series are very-fine, montmorillonitic, nonacid, thermic Typic Hydraquents.

Scatlake soils commonly are near Bellpass, Felicity, and Timbalier soils and are similar to Barbary and Larose

Depth to firm layers commonly is more than 40 inches from the surface. Reaction is mildly alkaline or moderately alkaline throughout the profile. Electrical conductivity ranges from 8 to 16 millimhos per centimeter throughout the profile.

The A horizon has hue of 10YR or 5Y, value of 2 to 4, and chroma of 1, or it is neutral. It is clay or mucky clay. Many pedons have a muck or peat surface layer that is 2 to 8 inches thick.

The C horizon has hue of 5Y, 10YR, 5GB, or 5GY, value of 4 or 5, and chroma of 1, or it is neutral. It is semifluid clay or mucky clay.

Some pedons have a IIC horizon that is fine sand, fine sandy loam, or loamy fine sand. The IIC horizon has hue of 10YR, 2.5Y, or 5Y, and chroma of 1, or it is neutral.

The Scatlake soils in Lafourche Parish are taxadjuncts to the Scatlake series because they have a IIC horizon that contains more sand than is permitted for the defined range of the series. This difference, however, does not affect the use and management of the soils.

Sharkey series

B21g—9 to 14 inches; gray (10YR 5/1) and dark gray (10YR 4/1) clay; common medium faint dark yellowish brown (10YR 4/4) and common coarse distinct reddish brown (5YR 4/4) mottles; moderate fine angular blocky structure; firm; mildly alkaline; gradual smooth boundary.

B22g—14 to 26 inches; dark gray (5Y 4/1) clay; common medium distinct dark yellowish brown (10YR 4/4) mottles; moderate fine angular blocky structure; firm; plastic; mildly alkaline; gradual smooth boundary.

B23g—26 to 35 inches; dark gray (5Y 4/1) clay; common medium distinct dark brown (7.5YR 4/4) mottles; weak medium angular blocky structure; firm; plastic; mildly alkaline; clear smooth boundary.

B3—35 to 60 inches; dark gray (5Y 4/1) clay; common medium distinct dark brown (7.5YR 4/4) mottles; weak medium subangular blocky structure; firm; plastic; mildly alkaline.

The solum thickness ranges from 36 to 60 inches. Reaction ranges from medium acid to moderately alkaline in the A and B horizons and from neutral to moderately alkaline in the C horizon. Content of clay averages more than 60 percent in the control section. Cracks of 1 to 3 centimeters in width form to a depth of from 20 to 24 inches from the surface in most years.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. It is clay, silty clay, or silty clay loam.

The B and C horizons have hue of 10YR or 5Y, value of 4 or 5, and chroma of 1, or they are neutral. Thin layers of silty clay loam or silt loam are below the control section or within the control section in some pedons.

Timbalier series

The Timbalier series consists of very poorly drained, rapidly permeable, saline, organic soils. These soils formed in thick accumulations of decomposed, herbaceous plant material. They are in saline coastal marshes that are ponded and flooded most of the time. Elevation ranges from sea level to about 1 foot above sea level. Slope is less than 0.2 percent.

Soils of the Timbalier series are euic, thermic Typic Medisaprists.

Timbalier soils commonly are near Bellpass and Scatlake soils, and they are similar to Kenner and Scatlake soils. The organic Bellpass soils are moderately deep to mineral material. Kenner and Lafitte soils are not so saline as Timbalier soils. The Scatlake soils are semifluid, mineral soils.

Typical pedon of Timbalier muck, in an area of Timbalier-Bellpass association, 5 miles south of Golden Meadow, 4 miles east of Bayou Lafourche:

Oa1—0 to 6 inches; very dark grayish brown (10YR 3/2) muck; about 12 percent fiber, 5 percent rubbed; massive; flows easily between fingers when squeezed leaving small residue in the hand; about 60 percent mineral; few fine roots; moderately alkaline; clear smooth boundary.

Oa2—6 to 28 inches; very dark brown (10YR 2/2) muck; about 10 percent fiber, 5 percent rubbed; massive; flows easily between fingers when squeezed leaving hand empty; few fine live roots; dominantly herbaceous material; about 55 percent mineral; moderately alkaline; clear smooth boundary.

Oa3—28 to 48 inches, very dark grayish brown (10YR 3/2) muck; about 20 percent fiber, 8 percent rubbed; massive; flows easily between fingers when squeezed leaving hand empty; dominantly herbaceous material; about 60 percent mineral; moderately alkaline; clear smooth boundary.

Oa4—48 to 72 inches; dark brown (7.5YR 3/2) muck; very dark gray (10YR 3/1) pressed and rubbed; about 10 percent fiber, 6 percent rubbed; massive; flows easily between fingers when squeezed leaving hand empty; dominantly herbaceous material; about 65 percent mineral; moderately alkaline; abrupt smooth boundary.

IIC1g—72 to 78 inches; dark gray (5Y 4/1) mucky clay; massive; flows easily between fingers when squeezed leaving hand empty; moderately alkaline; abrupt smooth boundary.

IIC2g—78 to 84 inches; dark greenish gray (5GY 4/1) clay; massive; flows easily between fingers when squeezed leaving hand empty; moderately alkaline.

Depth to clayey mineral layers ranges from 51 inches to more than 100 inches. Reaction ranges from neutral to moderately alkaline in the surface layer and moderately alkaline below. The organic part of the soil is dominantly herbaceous, and the mineral part is dominantly clay. Conductivity ranges from 8 to 16 millimhos per centimeter in some layers within a depth of 40 inches from the surface.

The surface tier to a depth of 12 inches has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 or 2. Fiber content, after rubbing, ranges from 1 to 35 percent. The average content of mineral material ranges from 30 to 70 percent. Some pedons have a thin overwash of mineral material on the surface that ranges in thickness from 2 to 16 inches.

The organic material in the subsurface tier from a depth of 12 to 36 inches and the bottom tier from a depth of 36 to 51 inches have hue of 7.5YR or 10YR, value of 1 to 3, and chroma of 1 to 3. The content of fiber, after rubbing, ranges from 1 to 10 percent of the organic volume.

The IICg horizon has hue of 5Y, 5G, or 5GY, value of 4 to 6, and chroma of 1, or it is neutral. It is clay or silty clay. Thin layers of silt loam or fine sand are in the IICg

horizon in some pedons. Some pedons have a IIAb horizon.

Tunica series

The Tunica series consists of poorly drained, very slowly permeable, firm, mineral soils that formed in clayey alluvium over loamy alluvium. These soils are on the lower parts of natural levees along Bayou Lafourche and its distributaries. They are flooded frequently. Elevation ranges from 1 foot to 3 feet above sea level. Slope is less than 1 percent.

Soils of the Tunica series are fine, montmorillonitic, nonacid, thermic Vertic Fluvaquents.

Tunica soils commonly are near Commerce and Vacherie soils. Commerce soils are in positions similar to those of the Tunica soils, and they do not have clayey underlying material. The poorly drained Vacherie soils are in lower positions than Tunica soils and have more clay in the upper part of the profile.

Typical pedon of Tunica silty clay loam, 2 miles northwest

Vacherie series

The Vacherie series consists of poorly drained, very slowly permeable, mineral soils that formed in coarse-silty alluvium. These soils are on the lower parts of natural levees along Bayou Lafourche and its distributaries. Elevation ranges from 1 foot to 10 feet above sea level. Slope is less than 1 percent.

Soils of the Vacherie series are coarse-silty over clayey, mixed, nonacid, thermic Aeric Fluvaquents.

Vacherie soils commonly are near Commerce and Sharkey soils. Commerce soils are in positions similar to those of the Vacherie soils, and they do not have clayey underlying material. The poorly drained Sharkey soils are in lower positions than Vacherie soils and have more clay in the upper part of the profile.

Typical pedon of Vacherie silt loam, 3 miles northwest

formation of the soils

Dr. Bobby J. Miller, Department of Agronomy, Agricultural Experiment Station, Louisiana State University, prepared this section.

This section explains the processes and factors of soil formation and relates them to the soils in the survey area.

processes of soil formation

The processes of soil formation influence the kind and degree of development of soil horizons. The factors of soil formation include climate, living organisms, relief, parent material, and time. These factors determine the rate and relative effectiveness of the different processes.

Important soil forming processes are those that result in (1) additions of organic, mineral, and gaseous materials to the soil; (2) losses of these same materials from the soil; (3) translocation of material from one point to another within the soil; and (4) physical and chemical transformation of mineral and organic material within the soil (*8*).

Many processes occur simultaneously, for example, [illegible] the development of horizons and in surface horizons that contain the most organic matter.

Most of the soils mapped in Lafourche Parish have horizons in which the reduction of iron and manganese compounds is an important process. Reducing conditions prevail for long periods in poorly aerated horizons. Consequently, the relatively soluble reduced forms of iron and manganese predominate over the less soluble oxidized forms. The reduced compounds of these elements result in the gray colors in the Bg and Cg horizons that are characteristic of many of these soils. In the more soluble reduced form, appreciable amounts of iron and manganese can be removed from the soils or translocated from one position to another within the soil by water.

Water moving through the soil has leached many soluble components, including any free carbonates that may have been present initially, from the upper horizons of some of the mineral soils in the parish. The carbonates and other more readily soluble salts have been moved to lower horizons in the better drained, loamy soils, such as Commerce soils. In general, the permanently wet soils of the marshes and swamps have been leached very little. Areas of organic soils, however

formation. Climate is uniform throughout the parish, although its effect is modified locally by relief. The minor climate differences within the parish are not considered to be of enough significance to create soil differences. More detailed information about the climate is in the climate section "General Nature of the Survey Area."

living organisms

Living organisms, including plants, bacteria, fungi, and animals, are important in the formation of soils. Among the chemical and physical changes they cause are gains in content of plant nutrients and changes in structure and porosity. Plant roots force openings into the soil and modify porosity. As they grow, they break up and rearrange the soil particles. These plants transfer nutrients from the subsoil to the surface layer and supply humus to the soils when they die. Bacteria decomposes organic matter and helps improve the physical condition of the soil. Animals, such as crawfish and earthworms,

parent material

Parent material is the unconsolidated mass in which soil forms. It determines the chemical and mineralogical composition of the soils. It also influences the degree of leaching, the reaction, texture, permeability, and drainage, and the kind and color of the surface and subsoil layers. Textural differences in parent material are accompanied by differences in chemical and mineral composition. In general, soils that form in loamy and sandy parent material have a lower capacity to hold nutrients than those that form in clay.

Soils of Lafourche Parish formed in alluvial and marine sediment and accumulations of organic material.

The alluvium is from distributary streams of a former delta of the Mississippi River (*7*). Bordering the stream channels are low ridges called natural levees. These levees are highest next to the channels and slope gradually away from it. The levees are shaped by the loss of velocity of waters that overspread the

the lowlands between the ridges are mainly along Bayou Lafourche. These ridges are 1 foot to 15 feet high. They are generally level or have slopes of 1 percent or less. The fine texture of the soils, the flatness of the land, and the low elevations above the Gulf all contribute to the poor drainage that is characteristic of most of the parish.

time

The kinds of horizons and their degree of development within a soil are influenced by the length of time of soil formation. Long periods of time are generally required for soils to form prominent horizons.

In general, the soils of Lafourche Parish are young. Time has been too short for distinct horizons to have developed. However, soils on the natural levees of streams, such as Commerce, Sharkey, Tunica, and Vacherie soils, have been influenced by soil forming processes long enough to have developed faintly differentiated horizons. Evidence of this development is a darkening of the A horizon by organic matter and a weakly developed B horizon. These soils developed in alluvium thought to be about 2,000 years old (*7*).

The youngest soils in the parish have little, if any, profile development. For example, Felicity soils have developed neither a darkened A horizon nor a B horizon. The Allemands and Bellpass soils are also young and show little evidence of profile development. These soils, which are in the marshes, are forming in recent accumulations of herbaceous organic material and alluvium.

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glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly

Chiseling. Tillage with an implement having one or more soil-penetrating points that loosen the subsoil and bring clods to the surface. A form of emergency

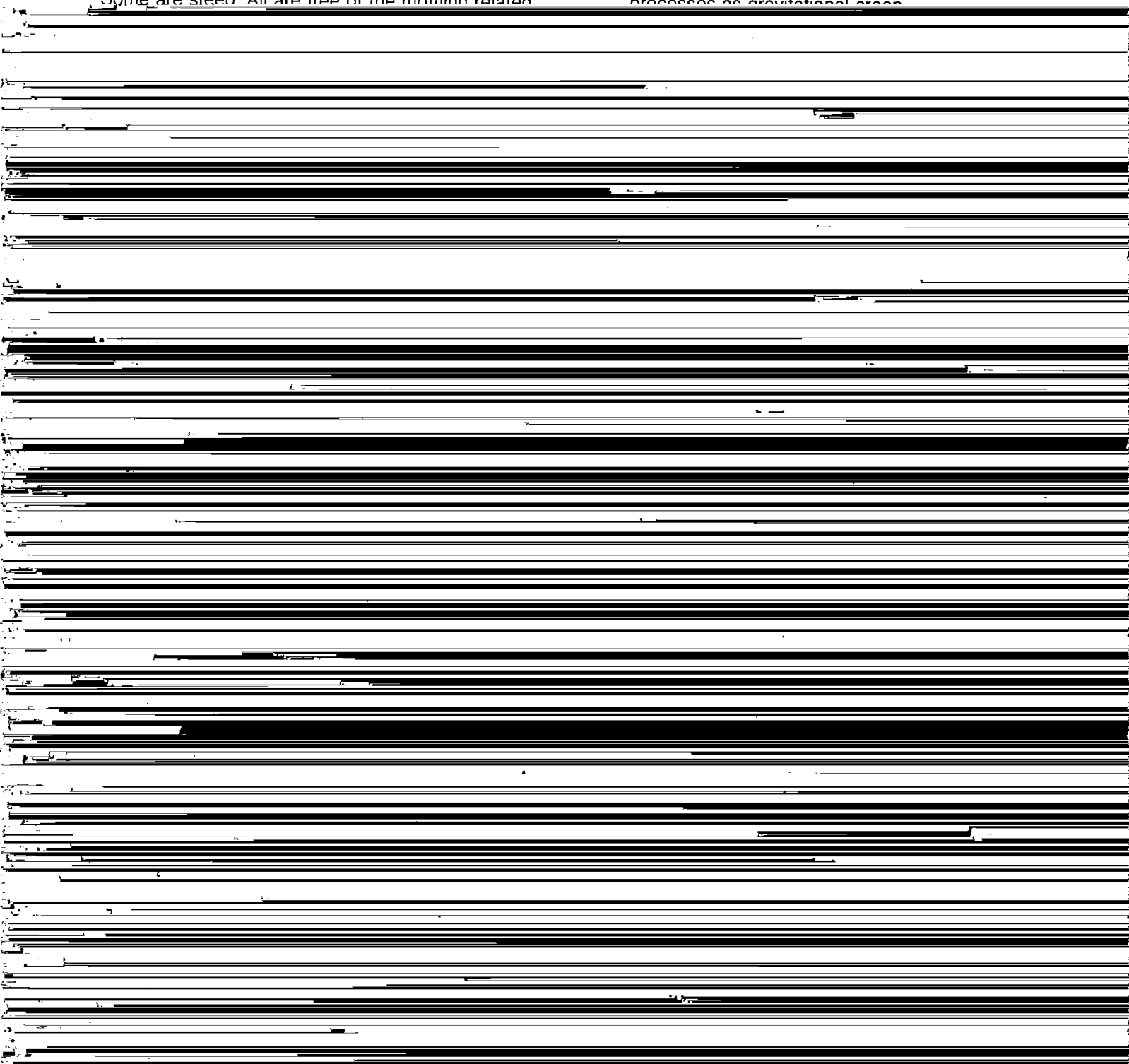
Drainage class (natural). Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

Excessively drained.—Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related

surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients.

Drainage, surface. Runoff, or surface flow of water, from an area.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.



Ground water (geology). Water filling all the unblocked pores of underlying material below the water table.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between

are assigned to four groups. In group A are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They are mainly deep, well drained, and sandy or gravelly. In group

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 [illegible] depending on the variability of the

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degree of acidity or alkalinity is expressed as—

	pH
Extremely acid	Below 4.5
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Medium acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Mildly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Relief. The elevations or inequalities of a land surface, considered collectively.

Rooting depth (in tables). Shallow root zone. The soil is

Shrink-swell. The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75 feet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and plant and animal activities are largely confined to the solum.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsides. Settlement of organic soils or of soils containing semifluid layers.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Variant, soil. A soil having properties sufficiently different from those of other known soils to justify a new series name, but occurring in such a limited geographic area that creation of a new series is not justified.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1955-77 at New Orleans, Louisiana)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days[1]	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	61.5	42.6	52.0	81	19	186	4.73	2.06	6.89	6	.0
February	64.8	44.7	54.8	82	25	207	5.23	2.99	7.04	6	.1
March	71.1	51.3	61.2	84	31	361	4.66	1.82	6.96	6	.0
April	78.6	58.8	68.7	88	39	561	3.90	1.29	5.97	5	.0
May	84.4	65.1	74.8	92	50	769	5.01	2.27	7.23	6	.0
June	89.0	70.4	79.7	95	58	891	4.89	2.52	6.83	7	.0
July	90.4	73.1	81.8	97	67	986	6.25	4.42	7.94	10	.0
August	89.5	72.7	81.1	96	64	964	6.19	3.20	8.63	9	.0
September	86.3	69.6	78.0	94	56	840	6.32	2.83	9.16	7	.0
October	79.2	59.0	69.1	90	40	592	2.84	.98	4.34	4	.0
November	70.1	49.9	60.0	84	30	310	3.94	1.15	6.19	6	.0
December	64.2	44.9	54.6	82	23	199	5.39	3.28	7.27	7	.1
Yearly:											
Average	77.4	58.5	68.0	---	---	---	---	---	---	---	---
Extreme	---	---	---	97	19	---	---	---	---	---	---
Total	---	---	---	---	---	6,866	59.35	48.45	69.71	79	.2

[1] A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50° F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded for the period 1955-77 at New Orleans, Louisiana)

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
AE	Allemands muck	73,533	8.5
Am	Allemands muck, drained	10,590	1.2
AN	Allemands-Larose association	49,551	5.7
BB	Barbary-Fausse association	89,295	10.3
BE	Bellpass-Scatlake association	17,357	2.0
Cm	Commerce silt loam	34,875	4.0
Co	Commerce silty clay loam	17,675	2.0
FA	Fausse-Sharkey association	28,305	3.3
FE	Felicity loamy fine sand, frequently flooded	1,104	0.1
KE	Kenner muck	34,387	4.0
LA	Lafitte-Clovelly association	58,250	6.7
Ra	Rita muck	30,725	3.5
Rv	Rita Variant muck	1,490	0.2
SA	Scatlake muck	21,363	2.5
SC	Scatlake-Felicity complex	2,811	0.3
Sh	Sharkey silty clay loam	4,970	0.6
Sk	Sharkey clay	37,540	4.3
Sr	Sharkey clay, occasionally flooded	17,990	2.1
TB	Timbalier-Bellpass association	195,027	22.6
Tn	Tunica clay, frequently flooded	1,660	0.2
Va	Vacherie silt loam	1,550	0.2
	Water	135,872	15.7
	Total	865,920	100.0

TABLE 5.---YIELDS PER ACRE OF CROPS AND PASTURE

[Yields are those that can be expected under a high level of management. Absence of a yield figure indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Soil name and map symbol	Sugarcane	Soybeans	Corn	Rice	Common bermudagrass	Improved bermudagrass
	Ton	Bu	Bu	Bu	AUM*	AUM*
AE---------- Allemands	---	---	---	---	---	---
Am---------- Allemands	---	---	---	---	10.3	---
AN**: Allemands----------	---	---	---	---	---	---
Larose----------	---	---	---	---	---	---
BB**: Barbary----------	---	---	---	---	---	---
Fausse----------	---	---	---	---	---	---
BE**: Bellpass----------	---	---	---	---	---	---
Scatlake----------	---	---	---	---	---	---
Cm---------- Commerce	35	40	95	---	8.0	12.9
Co---------- Commerce	35	40	85	---	7.5	12.9
FA**: Fausse----------	---	---	---	---	---	---
Sharkey----------	---	---	---	---	5.0	---
FE---------- Felicity	---	---	---	---	---	---
KE---------- Kenner	---	---	---	---	---	---
LA**: Lafitte----------	---	---	---	---	---	---
Clovelly----------	---	---	---	---	---	---
Ra---------- Rita	---	---	---	---	10.3	---
Rv---------- Rita Variant	---	---	---	---	10.3	---
SA---------- Scatlake	---	---	---	---	---	---
SC**: Scatlake----------	---	---	---	---	---	---
Felicity----------	---	---	---	---	---	---
Sh, Sk---------- Sharkey	30	40	---	130	6.5	10.3
Sr---------- Sharkey	---	30	---	---	4.3	---

See footnotes at end of table.

TABLE 5.---YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Sugarcane	Soybeans	Corn	Rice	Common bermudagrass	Improved bermudagrass
	Ton	Bu	Bu	Bu	AUM*	AUM*
TB**:						
Timbalier	---	---	---	---	---	---
Bellpass	---	---	---	---	---	---

TABLE 6.--CAPABILITY CLASSES AND SUBCLASSES

[Miscellaneous areas are excluded. Absence of an entry indicates no acreage]

Class	Total	Major management concerns (Subclass)		
				Soil

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY

[Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available]

Soil name and map symbol	Ordination symbol	Management concerns			Potential productivity		Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Common trees	Site index	
BB*:							
Barbary	4w6	Slight	Severe	Severe	Baldcypress	---	Baldcypress.
					Water tupelo	60	
					Black willow	---	
Fausse	4w6	Slight	Severe	Severe	Baldcypress	---	Baldcypress.
					Water hickory	---	
					Overcup oak	---	
					Water tupelo	---	
Cm, Co	1w5	Slight	Moderate	Slight	Green ash	80	Eastern cottonwood,
Commerce					Eastern cottonwood	120	American sycamore.
					Nuttall oak	90	
					Water oak	110	
					Pecan	---	
					American sycamore	---	
					Sweetgum	---	
FA*:							
Fausse.	4w6	Slight	Severe	Severe	Water tupelo	---	Baldcypress.
					Baldcypress	---	
					Water hickory	---	
					Overcup oak	---	
Sharkey	3w6	Slight	Severe	Severe	Green ash	---	Eastern cottonwood.
					Eastern cottonwood	---	
					Overcup oak	---	
					Black willow	---	
Sh, Sk	2w6	Slight	Severe	Moderate	Green ash	85	Eastern cottonwood,
Sharkey					Eastern cottonwood	100	American sycamore.
					Cherrybark oak	90	
					Sweetgum	90	
					Water oak	---	
					Pecan	---	
					American sycamore	---	
Sr	3w6	Slight	Severe	Severe	Sweetgum	---	Eastern cottonwood.
Sharkey					Green ash	---	
					Eastern cottonwood	---	
					Water oak	---	
					Water hickory	---	
Tn*	3w6	Slight	Severe	Moderate	Cherrybark oak	90	Eastern cottonwood,
Tunica					Eastern cottonwood	105	American sycamore.
					Green ash	100	
					Nuttall oak	105	
					Sweetgum	---	
Va	1w5	Slight	Moderate	Slight	Green ash	---	Eastern cottonwood,
Vacherie					Eastern cottonwood	120	American sycamore.
					Sweetgum	110	
					American sycamore	---	

TABLE 8.--RECREATIONAL DEVELOPMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated]

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
AE Allemands	Severe: flooding, ponding, percs slowly.	Severe: ponding, excess humus, percs slowly.	Severe: flooding, excess humus, ponding.	Severe: ponding, excess humus.	Severe: flooding, ponding, excess humus.
Am Allemands	Severe: flooding, percs slowly, excess humus.	Severe: excess humus, percs slowly.	Severe: excess humus, percs slowly.	Severe: excess humus.	Severe: excess humus.
AN*: Allemands	Severe: flooding, ponding, percs slowly.	Severe: ponding, excess humus, percs slowly.	Severe: flooding, excess humus, ponding.	Severe: ponding, excess humus.	Severe: flooding, ponding, excess humus.
Larose	Severe: flooding, percs slowly, too clayey.	Severe: flooding, too clayey, percs slowly.	Severe: excess humus, flooding, percs slowly.	Severe: ponding, too clayey, excess humus.	Severe: flooding, ponding, excess humus.
BB*: Barbary	Severe: flooding, ponding, percs slowly.	Severe: ponding, excess humus, percs slowly.	Severe: excess humus, ponding, flooding.	Severe: ponding, excess humus.	Severe: ponding, flooding, excess humus.
Fausse	Severe: flooding, ponding, percs slowly.	Severe: ponding, too clayey, excess humus.	Severe: too clayey, excess humus, ponding.	Severe: ponding, too clayey, excess humus.	Severe: ponding, flooding, too clayey.
BE*: Bellpass	Severe: ponding, percs slowly, flooding.	Severe: ponding, excess humus, percs slowly.	Severe: excess humus, ponding, flooding.	Severe: ponding, excess humus.	Severe: flooding, excess humus, excess salt.
Scatlake	Severe: flooding, ponding, percs slowly.	Severe: ponding, too clayey, excess humus.	Severe: excess humus, ponding, too clayey.	Severe: ponding, too clayey, excess humus.	Severe: excess salt, ponding, flooding.
Cm Commerce	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Severe: erodes easily.	Moderate: wetness.
Co Commerce	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
FA*: Fausse	Severe: flooding, ponding, percs slowly.	Severe: ponding, too clayey, excess humus.	Severe: too clayey, excess humus, ponding.	Severe: ponding, too clayey, excess humus.	Severe: ponding, flooding, too clayey.
Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, flooding.	Severe: wetness, too clayey.	Severe: wetness, flooding, too clayey.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
FE---------- Felicity	Severe: flooding, too sandy, excess salt.	Severe: too sandy, excess salt.	Severe: too sandy, excess salt, flooding.	Severe: too sandy.	Severe: excess salt, flooding, droughty.
KE---------- Kenner	Severe: flooding, percs slowly, excess humus.	Severe: ponding, excess humus, percs slowly.	Severe: flooding, excess humus, percs slowly.	Severe: ponding, excess humus.	Severe: flooding, ponding, excess humus.
LA*: Lafitte----------	Severe: flooding, ponding, excess humus.	Severe: ponding, excess humus, excess salt.	Severe: excess humus, ponding, flooding.	Severe: ponding, excess humus.	Severe: excess salt, ponding, flooding.
Clovelly----------	Severe: flooding, ponding, percs slowly.	Severe: ponding, excess humus, percs slowly.	Severe: flooding, excess humus, ponding.	Severe: ponding, flooding, excess humus.	Severe: flooding, ponding, excess humus.
Ra---------- Rita	Severe: flooding,	Severe: excess humus,	Severe: excess humus,	Severe: excess humus.	Severe: excess humus.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
TB*: Bellpass	Severe: ponding, percs slowly, flooding.	Severe: ponding, excess humus, percs slowly.	Severe: excess humus, ponding, flooding.	Severe: ponding, excess humus.	Severe: flooding, excess humus, excess salt.
Tn* Tunica	Severe: flooding, percs slowly, too clayey.	Severe: too clayey, percs slowly.	Severe: too clayey, flooding, percs slowly.	Severe: too clayey.	Severe: flooding, too clayey.
Va Vacherie	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: wetness, percs slowly.	Severe: erodes easily.	Moderate: wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--NATIVE PLANTS ON SELECTED SOILS IN MARSH

Soil	Type of	Scientific name	Common name

TABLE 9.--NATIVE PLANTS ON SELECTED SOILS IN MARSHES--Continued

Soil series	Type of marsh	Scientific name	Common name
Clovelly	Brackish	Scirpus robustus	Saltmarsh bulrush
Lafitte		Sesbania exaltata	Hemp sesbania
		Spartina cynosuroides	Big cordgrass
		Spartina patens	*Marshhay cordgrass
		Vigna luteola	Hairypod cowpea
Allemands	Freshwater	Acer rubrum drummondii	Drummond maple
Kenner			

TABLE 9.--NATIVE PLANTS ON SELECTED SOILS IN MARSHES--Continued

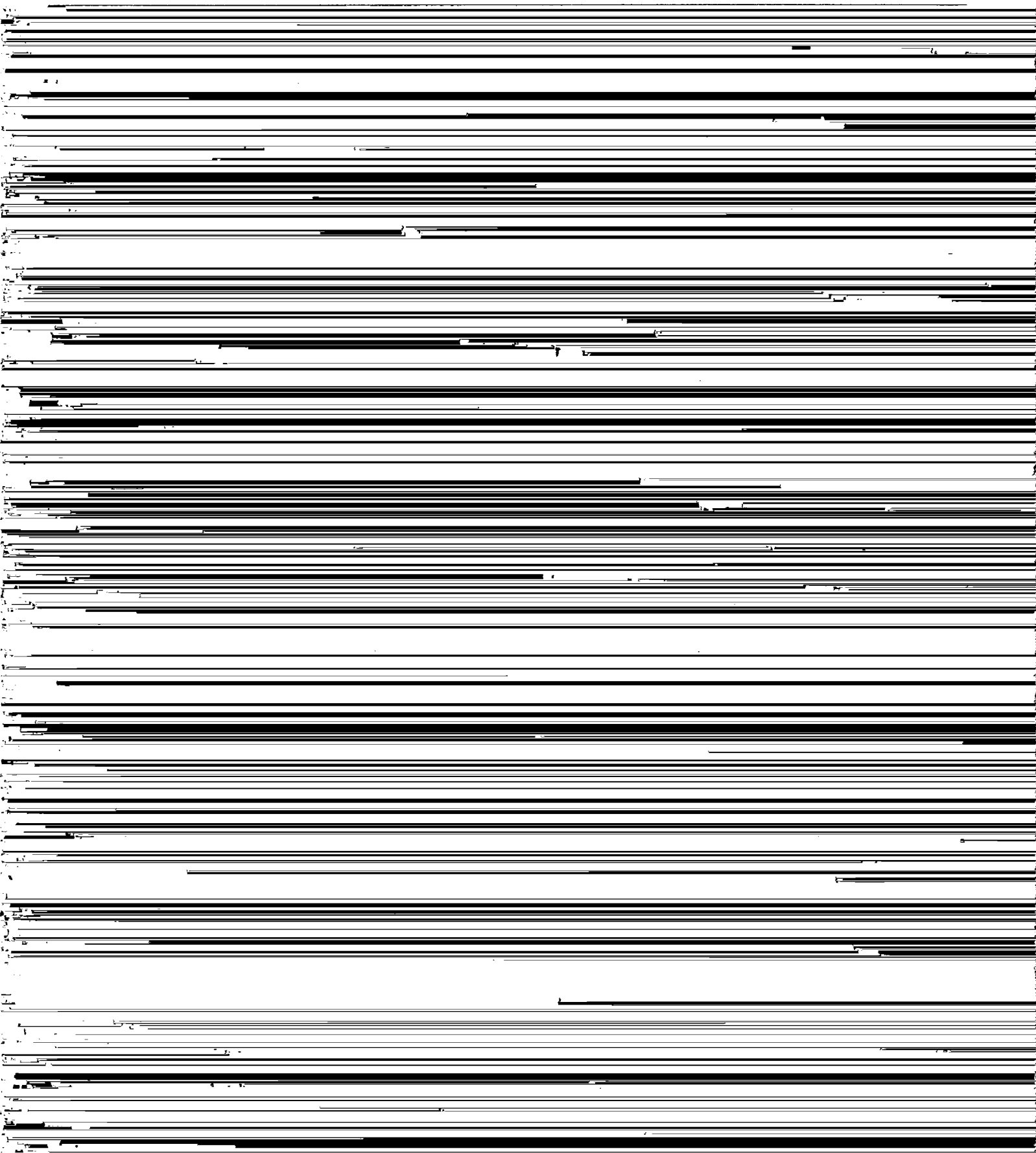


TABLE 10.--WILDLIFE HABITAT

[See next definitions of "good,""fair," " very poor." Absense of an entry indicates that the soil was not rated.]

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life
AE---------- Allemands	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Very poor.	Very poor.	Very poor.	Good.
Am---------- Allemands	Poor	Fair	Fair	Fair	Fair	Good	Very poor.	Fair	Fair	Good.
AN*:										
Allemands---------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Very poor.	Very poor.	Very poor.	Good.
Larose----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
BB*:										
Barbary----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Fair	Poor	Very poor.	Very poor.	Good.
Fausse----------	Very poor.	Very poor.	Very poor.	Poor	Poor	Good	Good	Very poor.	Poor	Good.
BE*:										
Bellpass----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
Scatlake----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
Cm, Co---------- Commerce	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
FA*:										
Fausse----------	Very poor.	Very poor.	Very poor.	Poor	Poor	Good	Good	Very poor.	Poor	Good.
Sharkey----------	Poor	Fair	Fair	Good	Good	Fair	Fair	Poor	Fair	Fair.
FE---------- Felicity	Very poor.	Very poor.	Poor	Very poor.	Poor	Very poor.	---	Very poor.	Very poor.	
KE---------- Kenner	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Very poor.	Very poor.	Very poor.	Good.
LA*:										
Lafitte----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Very poor.	Very poor.	Very poor.	Good.
Clovelly----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
Ra---------- Rita	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Rv---------- Rita Variant	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Sa---------- Scatlake	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
SC*:										
Scatlake----------	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.

See footnote at end of table.

TABLE 10.-WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
SC*:										
Felicity	Very poor.	Very poor.	Poor	Very poor.	Poor	Very poor.	Poor	Very poor.	Very poor.	Very poor.
Sh, Sk Sharkey	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Good	Good.
Sr Sharkey	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Good	Good
TB*:										
Timbalier	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
Bellpass	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
TN* Tunica	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Va Vacherie	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--BUILDING SITE DEVELOPMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated]

Soil name and map symbol	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
AE---------- Allemands	Severe: excess humus, ponding.	Severe: flooding, shrink-swell, low strength.	Severe: flooding, ponding, low strength.	Severe: flooding, low strength, ponding.	Severe: flooding, ponding, excess humus.
Am---------- Allemands	Severe: excess humus.	Severe: flooding, shrink-swell, low strength.	Severe: flooding, low-strength.	Severe: low strength.	Severe: excess humus.
AN*: Allemands--------	Severe: excess humus, ponding.	Severe: flooding, shrink-swell, low strength.	Severe: flooding, ponding, low strength.	Severe: flooding, low strength, ponding.	Severe: flooding, ponding, excess humus.
Larose----------	Severe: too clayey, excess humus, ponding.	Severe: flooding, shrink-swell, low strength.	Severe: flooding, shrink-swell, low strength.	Severe: low strength, ponding, shrink-swell.	Severe: flooding, ponding, excess humus.
BB*: Barbary----------	Severe: excess humus, ponding.	Severe: flooding, ponding, shrink-swell	Severe: flooding, ponding, shrink-swell	Severe: low strength, ponding, flooding	Severe: ponding, flooding, excess humus.

TABLE 11.-BUILDING SITE DEVELOPMENT--Continued

[redacted]

TABLE 11.-BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tn*---------- Tunica	Severe: wetness.	Severe: flooding, shrink-swell.	Severe: flooding, shrink-swell.	Severe: low strength, flooding, shrink-swell.	Severe: flooding, too clayey.
Va---------- Vacherie	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell.	Moderate: wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated]

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
KE---------- Kenner	Severe: flooding, percs slowly.	Severe: flooding, seepage, excess humus.	Severe: flooding, seepage, ponding.	Severe: flooding, seepage, ponding.	Poor: ponding, excess humus.
LA*: Lafitte----------	Severe: flooding, ponding.	Severe: seepage, flooding, excess humus.	Severe: flooding, ponding, excess humus.	Severe: flooding, seepage, ponding.	Poor: ponding, excess humus.
Clovelly----------	Severe: flooding, ponding, percs slowly.	Severe: ponding, seepage, excess humus.	Severe: ponding, too clayey, excess humus.	Severe: flooding, seepage, ponding.	Poor: too clayey, ponding, excess humus.
Ra---------- Rita	Severe: wetness, percs slowly.	Severe: flooding, wetness.	Severe: wetness, too clayey.	Severe: seepage, wetness.	Poor: wetness, too clayey, hard to pack.
Rv---------- Rita Variant	Severe: wetness, percs slowly.	Severe: flooding, excess humus, wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
SA---------- Scatlake	Severe: flooding, ponding, percs slowly.	Severe: flooding, excess humus, ponding.	Severe: flooding, ponding, too clayey.	Severe: flooding, ponding.	Poor: too clayey, hard to pack, ponding.
SC*: Scatlake----------	Severe: flooding, ponding, percs slowly.	Severe: flooding, excess humus, ponding.	Severe: flooding, ponding, too clayey.	Severe: flooding, ponding.	Poor: too clayey, hard to pack, ponding.
Felicity----------	Severe: flooding, poor filter, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, wetness, seepage.	Poor: seepage.
Sh, Sk---------- Sharkey	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Sr---------- Sharkey	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
TB*: Timbalier----------	Severe: flooding, ponding.	Severe: ponding, seepage, excess humus.	Severe: ponding, excess humus, excess salt.	Severe: flooding, seepage, ponding.	Poor: ponding, excess humus, excess salt.
Bellpass----------	Severe: flooding, ponding, percs slowly.	Severe: ponding, seepage, excess humus.	Severe: ponding, too clayey, excess humus.	Severe: flooding, seepage, ponding.	Poor: too clayey, ponding, excess humus.
Tn*---------- Tunica	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: too clayey, wetness.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Va---------- Vacherie	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 13.--CONSTRUCTION MATERIALS

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," "poor," "probable," and "improbable." Absence of an entry indicates that the soil was not rated]

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
AE, Am---------- Allemands	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess humus, wetness.
AN*: Allemands----------	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess humus, wetness.
Larose----------	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, excess humus, wetness.
BB*: Barbary----------	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess humus, wetness.
Fausse----------	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
BE*: Bellpass----------	Poor:	Improbable:	Improbable:	Poor:

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and	Roadfill	Sand	Gravel	Topsoil

TABLE 14.--WATER MANAGEMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated]

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Grassed waterways

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Grassed waterways
LA*: Lafitte	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill.	Ponding, flooding, subsides.	Ponding, flooding, percs slowly.	Wetness, excess salt.
Clovelly	Slight	Severe: piping, ponding, excess humus.	Slight	Flooding, percs slowly, subsides.	Flooding, ponding, percs slowly.	Wetness, percs slowly, excess salt.
Ra Rita	Slight	Severe: wetness, hard to pack.	Severe: slow refill.	Percs slowly, subsides.	Wetness, fast intake, percs slowly.	Wetness, percs slowly.
Rv Rita Variant	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Percs slowly, subsides.	Wetness, fast intake, percs slowly.	Wetness, percs slowly.
SA Scatlake	Slight	Severe: excess humus, hard to pack, ponding.	Severe: slow refill.	Ponding, percs slowly, subsides.	Ponding, percs slowly, excess salt.	Wetness, excess salt.
SC*: Scatlake	Slight	Severe: excess humus, hard to pack, ponding.	Severe: slow refill.	Ponding, percs slowly, subsides.	Ponding, percs slowly. excess salt.	Wetness, excess salt.
Felicity	Severe: seepage.	Severe: seepage.	Severe: cutbanks cave.	Flooding, cutbanks cave, excess salt.	Wetness, fast intake, droughty.	Excess salt, droughty.
Sh Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Sk Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, slow intake, percs slowly.	Wetness, percs slowly.
Sr Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, slow intake, percs slowly.	Wetness, percs slowly.
TB*: Timbalier	Severe: seepage.	Severe: excess humus, ponding.	Moderate: salty water.	Flooding, subsides, excess salt.	Ponding, flooding, excess salt.	Wetness, excess salt.
Bellpass	Slight	Severe: piping, ponding, excess humus.	Moderate: salty water.	Flooding, percs slowly, subsides.	Flooding, percs slowly, excess salt.	Wetness, percs slowly, excess salt.
Tn* Tunica	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, slow intake, percs slowly.	Percs slowly.
Va Vacherie	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly, erodes easily.	Wetness, erodes easily, percs slowly.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 15.--ENGINEERING INDEX PROPERTIES

[The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated]

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
AE	0-18	Muck	PT	A-8	0	---	---	---	---	---	---
Allemands	18-72	Clay, mucky clay	MH, OH	A-7-5	0	100	100	95-100	80-100	65-90	30-50
Am	0-20	Muck	PT	A-8	0	---	---	---	---	---	---
Allemands	20-60	Clay, mucky clay	MH, OH	A-7-5	0	100	100	95-100	80-100	65-90	30-50
AN*:											
Allemands	0-48	Muck	PT	A-8	0	---	---	---	---	---	---
	48-84	Clay, mucky clay	MH, OH	A-7-5	0	100	100	95-100	80-100	65-90	30-50
Larose	0-5	Muck	PT	A-8	0	---	---	---	---	---	---
	5-15	Clay, silty clay, mucky clay.	OH, MH, CH	A-7-5, A-7-6	0	100	100	100	90-100	60-87	30-52
	15-84	Clay, silty clay, mucky clay.	OH, MH, CH	A-7-5, A-7-6	0	100	100	100	90-100	60-87	30-52
BB*:											
Barbary	0-2	Muck	PT	A-8	0	---	---	---	---	---	---
	2-62	Mucky clay, clay	OH, MH	A-7-5, A-8	0	100	100	100	95-100	70-90	35-45
Fausse	0-5	Clay	CH, OH, MH	A-7-6, A-7-5	0	100	100	100	95-100	50-100	21-71
	5-38	Clay	CH	A-7-6, A-7-5	0	100	100	100	95-100	60-100	31-71
	38-60	Clay, silty clay, silty clay loam.	CH, MH, CL, ML	A-7-6, A-7-5	0	100	100	100	95-100	45-100	16-71
BE*:											
Bellpass	0-30	Muck	PT	A-8	0	---	---	---	---	---	---
	30-74	Clay, silty clay	CH, MH, CL	A-7-6, A-7-5	0	100	100	100	90-100	47-87	30-52
Scatlake	0-6	Clay	OH, MH	A-7-5	0	100	100	100	95-100	55-90	15-45

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
FE Felicity	0-60	Loamy fine sand	SP-SM, SM	A-2, A-3	0-10	85-100	75-100	51-80	5-30	<20	NP-4
KE Kenner	0-65	Muck	PT	A-8	0	---	---	---	---	---	---
	65-70	Clay, silty clay, mucky clay.	MH, OH	A-7-5	0	100	100	100	95-100	70-100	30-55
LA*:											
Lafitte	0-74	Muck	PT	A-8	0	---	---	---	---	---	---
	74-84	Clay, silty clay, silty clay loam.	MH, CH, ML, CL	A-7-5, A-7-6	0	100	100	90-100	80-100	45-100	16-60
Clovelly	0-36	Muck	PT	A-8	0	---	---	---	---	---	---
	36-84	Clay, silty clay, mucky clay.	CH, CL, MH	A-7-6, A-7-5	0	100	100	95-100	85-95	47-87	25-50
Ra Rita	0-4	Muck	PT	A-8	---	---	---	---	---	---	---
	4-30	Clay, silty clay	CH, MH	A-7-6, A-7-5	0	100	100	100	95-100	60-90	35-52
	30-43	Clay, silty clay, silty clay loam.	CH, MH	A-7-6, A-7-5	0	100	100	100	95-100	55-85	26-52
	43-68	Silt loam, fine sandy loam, loamy very fine sand.	ML, CL, SM, SC	A-4, A-6	0	100	100	70-95	40-90	<38	NP-20
Rv Rita Variant	0-4	Muck	PT	A-8	---	---	---	---	---	---	---
	4-7	Clay, silty clay, mucky clay.	CH, MH	A-7-6, A-7-5	0	100	100	100	95-100	60-90	35-52
	7-31	Clay, silty clay, silty clay loam.	CH, MH	A-7-6, A-7-5	0	100	100	100	95-100	55-85	26-52
	31-63	Silt loam, fine sandy loam, loamy very fine sand.	ML, CL, SM, SC	A-4, A-6	0	100	100	70-95	40-90	<38	NP-20
SA Scatlake	0-2	Muck	PT	A-8	0	---	---	---	---	---	---
	2-60	Clay	MH, OH	A-7-5	0	100	100	100	95-100	70-90	35-45
SC*:											
Scatlake	0-8	Muck	PT	A-8	0	---	---	---	---	---	---
	8-48	Mucky clay, clay, mucky silty clay loam.	OH, MH	A-7-5	0	100	100	100	95-100	55-90	15-45
	48-60	Fine sand, fine sandy loam.	SM, SC, SC-SM	A-2, A-4	0	100	100	15-85	30-50	<20	NP-10
Felicity	0-60	Loamy fine sand	SP-SM, SM	A-2, A-3	0-10	85-100	75-100	51-80	5-30	<20	NP-4
Sh Sharkey	0-12	Silty clay loam	CL	A-6, A-7-6	0	100	100	100	95-100	32-50	11-25
	12-44	Clay	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	44-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
Sk Sharkey	0-9	Clay	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	9-35	Clay	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	35-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Sr---------- Sharkey	0-7	Clay----------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	7-46	Clay----------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	46-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
TB*: Timbalier	0-72	Muck	PT	A-8	0	---	---	---	---	---	---

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

[The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated]

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Organic matter
									K	T	
	In	Pct	G/cm^3	In/hr	In/in	pH	Mmhos/cm				Pct
AE----------	0-18	---	0.05-0.25	>2.0	0.20-0.50	5.1-7.3	<4	Low-------	----	---	30-70
Allemands	18-72	60-95	0.25-1.00	<0.06	0.14-0.18	6.1-8.4	<4	Very high	0.32		

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Organic matter
									K	T	
	In	Pct	G/cm^3	In/hr	In/in	pH	Mmhos/cm				Pct
Rv----------	0-4	---	0.15-0.50	2.0-6.0	0.20-0.50	3.6-6.0	<4	High------	----	---	30-70
Rita Variant	4-7	60-95	1.20-1.70	<0.06	0.11-0.18	3.6-6.0	<4	High------	0.37		
	7-31	60-95	0.25-1.00	<0.06	0.15-0.30	3.6-5.0	<4	Very high	0.37		
	31-63	5-27	0.25-1.00	0.2-2.0	0.11-0.30	4.5-8.4	<4	Moderate	0.32		
SA----------	0-2	---	0.05-0.25	>2.0	0.15-0.40	7.4-8.4	8-16	----------	----	---	30-70
Scatlake	2-60	60-85	0.25-1.00	<0.06	0.10-0.17	7.4-8.4	8-16	Very high	0.28		
SC*:											
Scatlake--------	0-8	---	0.05-0.25	>2.0	0.15-0.40	7.4-8.4	8-16	----------	----	---	30-70
	8-48	27-60	0.25-1.00	<0.2	0.05-0.15	7.4-8.4	8-16	Very high	0.24		

TABLE 17.--SOIL AND WATER FEATURES

["Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than;> means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Soil name and map symbol	Hydrologic group	Flooding			High water table			Subsidence		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Initial	Total	Uncoated steel	Concrete
					Ft			In	In		
AE---------- Allemands	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	8-25	16-51	High-----	Moderate.
Am---------- Allemands	D	Rare--------	---	---	2-4.0	Apparent	Jan-Dec	8-25	16-51	High-----	High.
AN*:											
Allemands--------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	8-25	16-51	High-----	Moderate.
Larose----------	D	Frequent----	Very long	Jan-Dec	+2-0.5	Apparent	Jan-Dec	2-12	5-15	High-----	Moderate.
BB*:											
Barbary----------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	3-12	6-15	High-----	Moderate.
Fausse----------	D	Frequent----	Very long	Jan-Dec	+1-1.5	Apparent	Jan-Dec	---	---	High-----	Low.
BE*:											
Bellpass---------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	8-25	6-51	High-----	Moderate.
Scatlake---------	D	Frequent	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	3-12	6-15	High-----	Moderate.
Cm, Co---------- Commerce	C	None--------	---	---	1.5-4.0	Apparent	Dec-Apr	---	---	High-----	Low.
FA*:											
Fausse----------	D	Frequent----	Very long	Jan-Dec	+1-1.5	Apparent	Jan-Dec	---	---	High-----	Low.
Sharkey----------	D	Frequent----	Brief to very long.	Dec-Jun	0-2.0	Apparent	Dec-Apr	---	---	High-----	Low.
FE---------- Felicity	A	Frequent----	Brief-----	Jan-Dec	2.0-3.0	Apparent	Jan-Dec	---	---	High-----	Moderate.
KE---------- Kenner	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	15-30	>51	High-----	Moderate.
LA*:											
Lafitte----------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	15-30	>51	High-----	Moderate.
Clovelly---------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	8-25	16-51	High-----	Moderate.
Ra---------- Rita	D	Rare--------	---	---	0-3.0	Apparent	Jan-Dec	1-5	4-10	High-----	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Subsidence		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Initial	Total	Uncoated steel	Concrete
					Ft			In	In		
Rv---------- Rita Variant	D	Rare---------	---	---	0-3.0	Apparent	Jan-Dec	1-5	4-10	High-----	High.
SA---------- Scatlake	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	3-12	6-15	High-----	Moderate.
SC*: Scatlake---------	D	Frequent----	Very long	Jan-Dec	+1-0.5	Apparent	Jan-Dec	3-12	6-15	High-----	Moderate.
Felicity---------	A	Frequent----	Brief-----	Jan-Dec	2.0-3.0	Apparent	Jan-Dec	---	---	High-----	Moderate.
Sh, Sk---------- Sharkey	D	Rare---------	---	---	0-2.0	Apparent	Dec-Apr	---	---	High-----	Low.
Sr----------	D	Occasional	Brief to	Dec-Jun	0-2.0	Apparent	Dec-Apr	---	---	High-----	Low.

TABLE 18.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Allemands	Clayey, montmorillonitic, euic, thermic Terric Medisaprists
Barbary	Very-fine, montmorillonitic, nonacid, thermic Typic Hydraquents
Bellpass	Clayey, montmorillonitic, euic, thermic Terric Medisaprists
Clovelly	Clayey, montmorillonitic, euic, thermic Terric Medisaprists
Commerce	Fine-silty, mixed, nonacid, thermic Aeric Fluvaquents
Fausse	Very-fine, montmorillonitic, nonacid, thermic Typic Fluvaquents
Felicity	Mixed, thermic Aquic Udipsamments
Kenner	Euic, thermic Fluvaquentic Medisaprists
Lafitte	Euic, thermic Typic Medisaprists
Larose	Very-fine, montmorillonitic, nonacid, thermic Typic Hydraquents
Rita	Very-fine, montmorillonitic, nonacid, thermic, cracked Hydric Fluvaquents
Rita Variant	Very-fine, montmorillonitic, acid, thermic, cracked Hydric Fluvaquents